

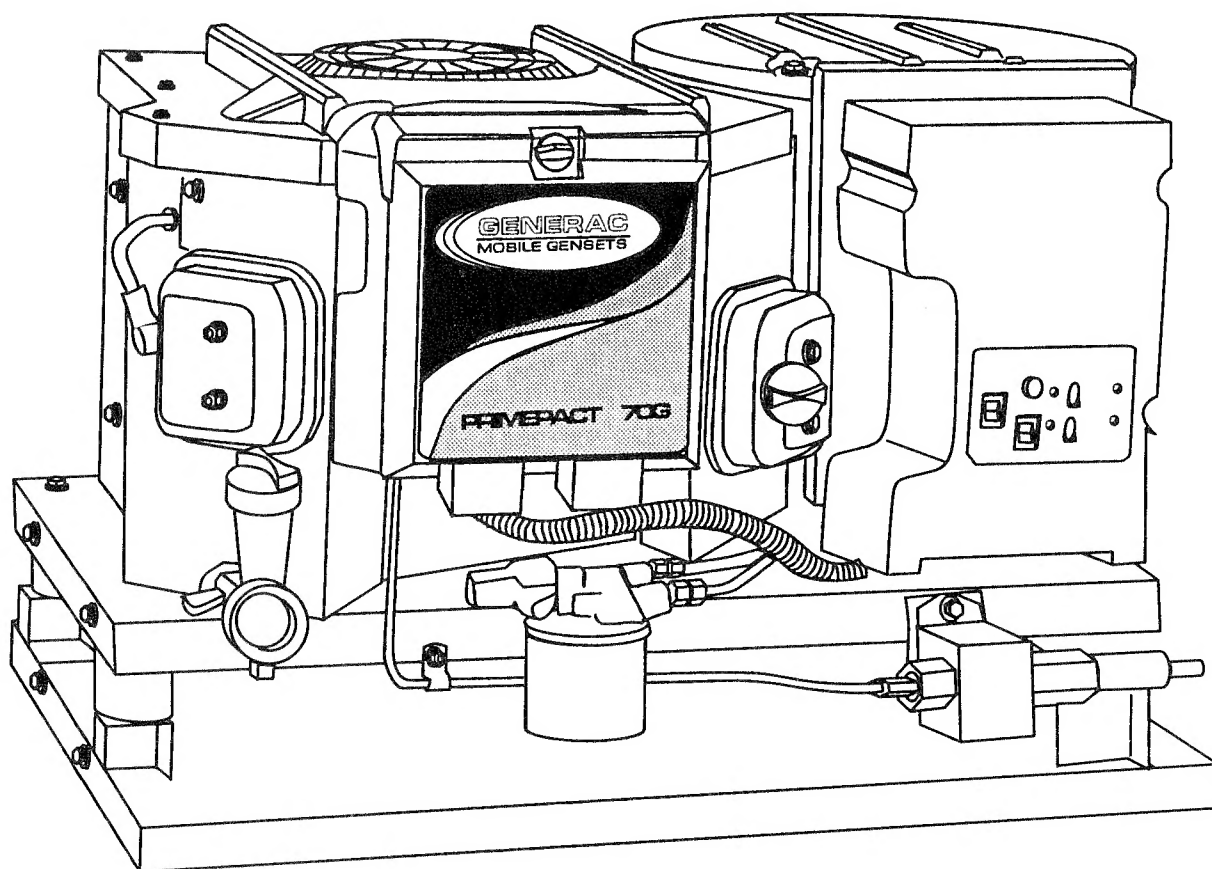
GENERAC[®]

POWER SYSTEMS, INC.

Owner's Manual

Air-cooled Recreational
Vehicle Generators

• Model: 0784-1



INTRODUCTION

◆ READ THIS MANUAL THOROUGHLY

If you do not understand any portion of this manual, contact Generac or your nearest Generac Authorized Service Dealer for starting, operating and servicing procedures.

Throughout this publication, and on tags and decals affixed to the generator, DANGER, WARNING, CAUTION and NOTE blocks are used to alert you to special instruction about a particular operation that may be hazardous if performed incorrectly or carelessly. Observe them carefully. Their definitions are as follows:

— **DANGER** —

After this heading, you can read instructions that, if not strictly complied with, will result in personal injury or property damage.

— **WARNING** —

After this heading, you can read instructions that, if not strictly complied with, may result in personal injury or property damage.

— **CAUTION** —


After this heading, you can read instructions that, if not strictly complied with, could result in damage to equipment and/or property.


NOTE:


After this heading, you can read explanatory statements that require special emphasis.


These safety warnings cannot eliminate the hazards that they indicate. Common sense and strict compliance with the special instructions while performing the service are essential to preventing accidents.

Four commonly used safety symbols accompany the DANGER, WARNING and CAUTION blocks. The type of information each indicates follows:

 This symbol points out important safety information that, if not followed, could endanger personal safety and/or property of you and others.

 This symbol points out potential explosion hazard.

 This symbol points out potential fire hazard.

 This symbol points out potential electrical shock hazard.

The operator (driver) is responsible for proper and safe use of the vehicle and its equipment, and the safety of all vehicle occupants. We strongly recommend that the operator read this manual and thoroughly understand all instructions before using this equipment. We also strongly recommend instructing other occupants in the vehicle to properly start and operate the generator. This prepares them if they need to operate the equipment in an emergency.

◆ CONTENTS

This manual contains pertinent owner's information, including warranty, electrical diagrams, exploded views and lists of repair parts for generator model numbers 02010-0 and 04164-0. In addition, the latter portion of this manual contains information necessary for the proper installation of these generators.

◆ OPERATION AND MAINTENANCE

It is the operator's responsibility to perform all safety checks, to make sure that all maintenance for safe operation is performed promptly, and to have the equipment checked periodically by a Generac Authorized Service Dealer. Normal maintenance service and replacement of parts are the responsibility of the owner/operator and, as such, are not considered defects in materials or workmanship within the terms of the warranty. Individual operating habits and usage contribute to the need for maintenance service.

Proper maintenance and care of your generator ensure a minimum number of problems and keep operating expenses at a minimum. See your Generac Authorized Service Dealer for service aids and accessories.

◆ HOW TO OBTAIN SERVICE

When your generator requires servicing or repairs, simply contact a Generac Authorized Service Dealer for assistance. Service technicians are factory-trained and are capable of handling all of your service needs.

When contacting a Generac Authorized Service Dealer or the factory about parts and service, always supply the complete model number and serial number of your unit as given on its data decal, which is located on your generator.

Model No. _____ Serial No. _____

AUTHORIZED SERVICE DEALER LOCATION

To locate the GENERAC AUTHORIZED SERVICE
DEALER nearest you, please call this number:

1-800-333-1322

ONLY DEALER LOCATION INFORMATION
CAN BE OBTAINED AT THIS NUMBER.

Table of Contents

Generac Q-70G Recreational Vehicle Generator

TABLE OF CONTENTS

IntroductionInside Front Cover

Read This Manual ThoroughlyIFC

Contents.....IFC

Operation and MaintenanceIFC

How to Obtain ServiceIFC

Authorized Service Dealer Locator Number.....IFC

Safety Rules2

Section 1 – General Information.....4

1.1 Generator Identification4

1.2 Generator Applicability5

1.3 Installation5

1.4 Safety5

1.5 Generator AC Connection System5

1.6 Specifications5

1.6.1 Fuel Requirements.....6

1.6.2 Engine Oil Requirements.....6

1.6.3 Engine6

1.6.4 Generator6

Section 2 – Operation7

2.1 Generator Control Panel7

2.1.1 Fuel Primer7

2.1.2 Start/Stop Switch7

2.1.3 Fuse.....7

2.1.4 Main Breaker.....7

2.2 Optional Remote Start/Stop Panel.....7

2.3 Automatic Choke.....7

2.3.1 Choke Solenoid7

2.3.2 Prechoke8

2.4 Before Starting the Engine8

2.4.1 Installation.....8

2.4.2 Engine Lubrication8

2.4.3 Fuel Supply8

2.4.4 Cooling and Ventilating Air8

2.4.5 Engine Exhaust Gas8

2.5 Starting the Generator8

2.6 Stopping the Generator.....9

2.7 Applying Loads to Generator9

2.7.1 Letting the Engine Stabilize9

2.7.2 Do Not Overload the Generator9

2.8 Protection Systems9

2.8.1 Low Oil Pressure Switch9

2.8.2 High Temperature Switch9

2.8.3 Field Boost10

2.8.4 Overvoltage Protection10

2.9 Additional Information10

2.9.1 25-Hour Break-in Period10

2.9.2 25-Hour Checkup10

2.9.3 Operation in High Grass or Brush10

Section 3 – Maintenance.....11

3.1 Checking the Engine Oil Level.....11

3.2 Changing the Engine Oil and/or Oil Filter11

3.3 Maintaining the Engine Air Cleaner12

3.3.1 Cleaning the Foam Precleaner12

3.4 Clean Air Intake Screen12

3.5 Checking the Engine Spark Plug.....12

3.6 Fuel Filter (Gasoline Only)13

3.7 Spark Arrestor Muffler13

3.8 Cleaning the Generator13

3.9 Battery Maintenance13

3.9.1 Weekly13

3.9.2 Every Six Months13

3.10 Major Service Manual14

3.11 Drive Belt14

3.12 Exercising the Generator14

3.13 Out of Service Procedure14

3.13.1 Removal From Service.....14

3.13.2 Return to Service.....15

3.14 Wattage Reference Guide.....15

Section 4 – Troubleshooting.....16

4.1 Troubleshooting Guide16

Section 5 – Electrical Data17

Section 6 – Exploded Views and Parts Lists18

Section 7 – Warranty28



Safety Rules

Generac Q-70G Recreational Vehicle Generator

SAVE THESE INSTRUCTIONS – The manufacturer suggests that these rules for safe operation be copied and posted in potential hazard areas of the recreational vehicle. Safety should be stressed to all operators and potential operators of this equipment.



WARNING:



The engine exhaust from this product contains chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

Study these SAFETY RULES carefully before installing, operating or servicing this equipment. Become familiar with this manual and with the unit. The generator can operate safely, efficiently and reliably only if it is properly installed, operated and maintained. Many accidents are caused by failing to follow simple and fundamental rules or precautions.

Generac cannot possibly anticipate every possible circumstance that might involve a hazard. The warnings in this manual, and on tags and decals affixed to the unit, are, therefore, not all-inclusive. If you use a procedure, work method or operating technique Generac does not specifically recommend, you must satisfy yourself that it is safe for you and others. You also must make sure the procedure, work method or operating technique that you choose does not render the generator unsafe.

— DANGER —

Despite the safe design of this generator, operating this equipment imprudently, neglecting its maintenance or being careless can cause possible injury or death. Permit only responsible and capable persons to operate or maintain this equipment.

Potentially lethal voltages are generated by these machines. Ensure all steps are taken to render the machine safe before attempting to work on the generator.

Parts of the generator are rotating and/or hot during operation. Exercise care near running generators.

GENERAL HAZARDS

- For safety reasons, Generac recommends that the installation, initial start-up and maintenance of this equipment is carried out by a Generac Authorized Service Dealer.
- The engine exhaust fumes contain carbon monoxide, which can be DEADLY. This dangerous gas, if breathed in sufficient concentrations, can cause unconsciousness or even death. This exhaust system must be installed properly, in strict compliance with applicable codes and standards. Following installation, you must do nothing that might render the system unsafe or in noncompliance with such codes and standards. The generator compartment must be completely vapor sealed from the vehicle interior. There must be no possibility of exhaust fumes entering the vehicle interior. Never operate this equipment with a leaking or defective exhaust system.
- Keep hands, feet, clothing, etc., away from drive belts, fans, and other moving or hot parts. Never remove any drive belt or fan guard while the unit is operating.
- Adequate, unobstructed flow of cooling and ventilating air is critical to correct generator operation and is required to expel toxic fumes and fuel vapors from the generator compartment. Without sufficient cooling airflow, the engine/generator quickly overheats, which causes serious damage to the generator. Do not alter the installation or permit even partial blockage of ventilation provisions, as this can seriously affect safe operation of the generator.
- When working on this equipment, remain alert at all times. Never work on the equipment when you are physically or mentally fatigued.
- Inspect the generator regularly, and contact your nearest Generac Authorized Service Dealer immediately for parts needing repair or replacement.
- Before performing any maintenance on the generator, disconnect its battery cables to prevent accidental start up. Disconnect the cable from the battery post indicated by a NEGATIVE, NEG or (–) first. Reconnect that cable last.
- Never use the generator or any of its parts as a step. Stepping on the unit can stress and break parts, and may result in dangerous operating conditions from leaking exhaust gases, fuel leakage, oil leakage, etc.



ELECTRICAL HAZARDS

- The generator covered by this manual produces dangerous electrical voltages and can cause fatal electrical shock. Avoid contact with bare wires, terminals, connections, etc., while the unit is running. Ensure all appropriate covers, guards and barriers are in place before operating the generator. If you must work around an operating unit, stand on an insulated, dry surface to reduce shock hazard.
- Do not handle any kind of electrical device while standing in water, while barefoot, or while hands or feet are wet. **DANGEROUS ELECTRICAL SHOCK MAY RESULT.**
- During installation onto the vehicle, have the generator properly grounded (bonded) either by solid mounting to the vehicle frame or chassis, or by means of an approved bonding conductor. **DO NOT** disconnect the bonding conductor, if so equipped. **DO NOT** reconnect the bonding conductor to any generator part that might be removed or disassembled during routine maintenance. If the grounding conductor must be replaced, use only a flexible conductor that is of No. 8 American Wire Gauge (AWG) copper wire minimum.
- In case of accident caused by electric shock, immediately shut down the source of electrical power. If this is not possible, attempt to free the victim from the live conductor. **AVOID DIRECT CONTACT WITH THE VICTIM.** Use a nonconducting implement, such as a rope or board, to free the victim from the live conductor. If the victim is unconscious, apply first aid and get immediate medical help.
- Never wear jewelry when working on this equipment. Jewelry can conduct electricity resulting in electric shock, or may get caught in moving components causing injury.

FIRE HAZARDS

- For fire safety, the generator must be installed and maintained properly. Installation always must comply with applicable codes, standards, laws and regulations. Adhere strictly to local, state and national electrical and building codes. Comply with regulations the Occupational Safety and Health Administration (OSHA) has established. Also, ensure that the generator is installed in accordance with the manufacturer's instructions and recommendations. Following proper installation, do nothing that might alter a safe installation and render the unit in noncompliance with the aforementioned codes, standards, laws and regulations.
- Keep a fire extinguisher in the vehicle at all times. Extinguishers rated "ABC" by the National Fire Protection Association are appropriate for use on the recreational vehicle generator electrical system. Keep the extinguisher properly charged and be familiar with its use. If you have any question pertaining to fire extinguishers, consult your local fire department.

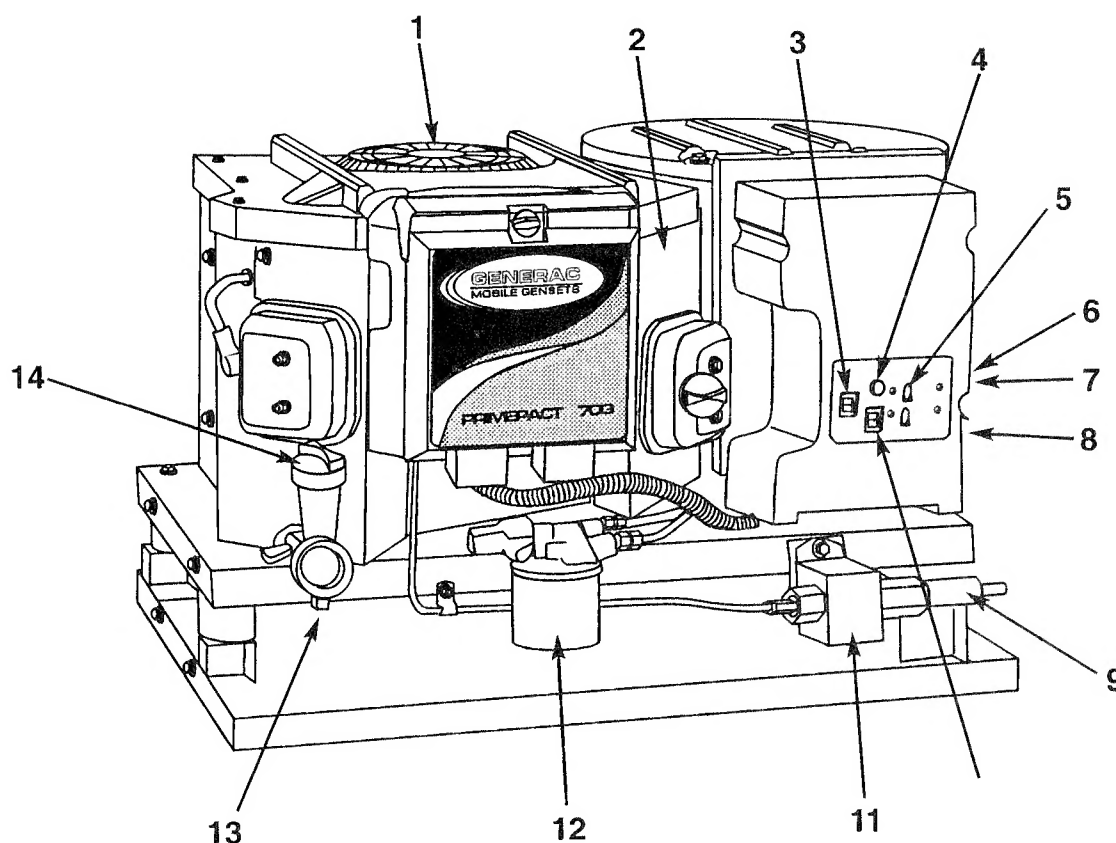
EXPLOSION HAZARDS

- Do not smoke around the generator. Wipe up any fuel or oil spills immediately. Ensure that no combustible materials are left in the generator compartment, or on or near the generator, as **FIRE** or **EXPLOSION** may result. Keep the area surrounding the generator clean and free from debris.
- Gasoline is extremely **FLAMMABLE** and its vapors are **EXPLOSIVE**. Do not permit smoking, open flame, sparks or any source of heat in the vicinity while handling gasoline. Comply with all laws governing the storage and handling of gasoline.
- This generator may use liquid propane (LP) gas as a fuel. LP gas is highly **EXPLOSIVE**. The gas is heavier than air and tends to settle in low areas where even the slightest spark can ignite the gas and cause an explosion.

1.1 GENERATOR IDENTIFICATION

Please record the following information from the generator DATA DECAL or information decal.

- | | |
|-----------------------|------------------------|
| 1. Model Number _____ | 2. Serial Number _____ |
| 3. kW Rating _____ | 4. Rated Voltage _____ |
| 5. Phase _____ | 6. Hertz _____ |




REFERENCE NUMBER IDENTIFICATION

- | | |
|-------------------------------------|----------------------------------|
| 1. Generator Air Intake Screen | 8. Starter Contactor |
| 2. Data Plate | 9. Fuel Inlet |
| 3. Engine Start/Stop Switch | 10. Fuel Primer Switch |
| 4. 15 amp Fuse | 11. Fuel Pump |
| 5. 30 amp Circuit Breaker | 12. Oil Filter |
| 6. Optional Remote Panel Receptacle | 13. Oil Drain Plug |
| 7. Generator AC Output Leads | 14. Oil Dipstick and Filler Tube |

1.2 GENERATOR APPLICABILITY


These generators have been designed and manufactured for supplying electrical power for recreational vehicles. You should not modify the generator or use it for any application other than for what it was designed. If there are any questions pertaining to its application, write or call the factory. Do not use the unit until you have been advised by a competent authority.



-  For fire safety, the generator must have been properly installed in compliance with ANSI 119.2-1975/NFPA 501C-1974, "Standard for Recreational Vehicles, Part III – Installation of Electrical Systems." The generator also must have been installed in strict compliance with the manufacturer's detailed installation instructions. After installation, do nothing that might render the unit in noncompliance with such codes, standards and instructions.

You can use this generator to supply electrical power for operating 230-volt, single-phase, 50 Hertz, AC electrical loads. These loads can require up to 7,000 watts (7.0 kW) of power, but cannot exceed 30.4 AC amperes of current at 230 volts.



-  Do not overload the generator. Some installations may require that electrical loads be alternated to avoid overloading. Applying excessively high electrical loads may damage the generator and may shorten its life. Add up the rated watts of all electrical lighting, appliance, tool and motor loads the generator will power at one time. This total should not be greater than the wattage capacity of the generator. If an electrical device nameplate gives only volts and amps, multiply volts times amps to obtain watts (volts x amps = watts). Some electric motors require more watts of power (or amps of current) for starting than for continuous operation.

1.3 INSTALLATION

This manual has been prepared under the assumption that a competent, qualified technician installed the generator into a recreational vehicle. We also assume the installer complied with all applicable codes, standards and regulations pertaining to installation.

Owners/Operators should make sure nothing is done during installation that might render the unit unsafe or in noncompliance with applicable codes standards and instructions. They should be sure the unit has been installed to allow adequate ventilation for cooling and exhaust air.

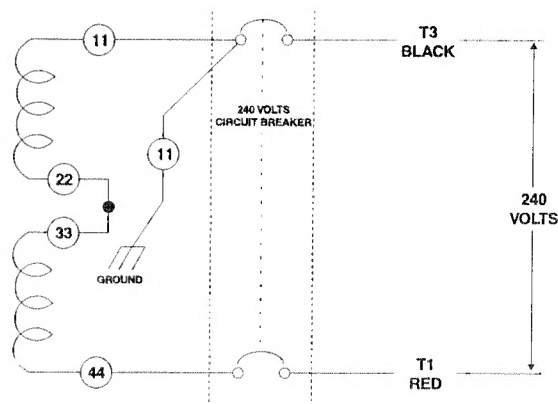
1.4 SAFETY

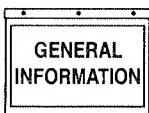
Before attempting to use the generator set, carefully read the "Safety Rules" section of this manual. Comply strictly with these rules to prevent accidents and damage to equipment and/or property. We suggest copying and posting the "Safety Rules" in potential hazard areas of the vehicle. Stress safety to all operators and potential operators of this equipment.

1.5 GENERATOR AC CONNECTION SYSTEM

This generator set is equipped with dual stator AC power windings. These two-stator windings supply electrical power to customer electrical loads by means of a dual two-wire connection system. Note, however, that the neutral is grounded.

Figure 1.1 – Connections for 230 Volts Only





1.6 SPECIFICATIONS

◆ 1.6.1 FUEL REQUIREMENTS

These generators are equipped with a gasoline fuel system. Depending on the installation, the generator may have either a separate fuel tank, or it may “share” the vehicle engine’s fuel tank.

NOTE:

Some installations using a “shared” fuel tank may have a generator fuel pickup tube that is shorter than the vehicle engine’s pickup tube. Such an arrangement causes the generator engine to “run out of gas” while adequate fuel for the vehicle remains in the tank.

To reduce lead and carbon deposits use high quality UNLEADED gasoline with the generator. Leaded REGULAR grade gasoline is an acceptable substitute.

NOTE:

Using unleaded gasoline contributes to longer engine valve life by reducing lead and carbon deposits.



⚠ Generac does not recommend using any gasoline containing alcohol (such as “gasohol”). If you use any gasoline containing alcohol, it must not contain more than 10 percent ethanol, and it must be removed from the generator during storage. Do NOT use any gasoline containing methanol. If you use gasoline with alcohol, inspect more frequently for fuel leaks and other abnormalities.

◆ 1.6.2 ENGINE OIL REQUIREMENTS

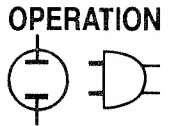
Use only high quality detergent oil classified “For Service SF” and with an oil viscosity rating of SAE 10W-30 oil. Do not pour in any additives to the recommended oil. Engine crankcase capacity is 1.4 liters. See Section 3.2 on page 11 for oil level check and filing procedures.

◆ 1.6.3 ENGINE

Type of Engine	GN-480, Twin-cylinder
Cooling Method	Air-cooled
Rated Horsepower	16 @ 3,600 rpm
Displacement	480cc
Compression Ratio	8.6 to 1
Cylinder Block	Aluminum w/Cast Iron Sleeve
Type of Governor	Mechanical, Fixed Speed
Engine Governor Speed	3000 rpm
Air Cleaner	Paper Element w/Foam Precleaner
Starter	12-volt DC Electric
Ignition System	Solid-state w/Flywheel Magneto
Recommended Spark Plug	
Champion	RC12YC
AC	R45S
Fram Autolite	65
Spark Plug Gap	0.030 inch (0.8 mm)

◆ 1.6.4 GENERATOR

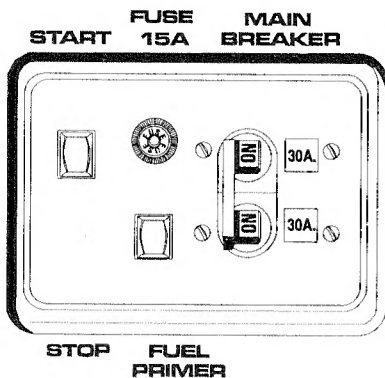
Rated Maximum Continuous	
AC Output	7,000 Watts (7.0 kW)
Rated Voltage	230 Volts
Rated Maximum Continuous	
AC Current	30.4 Amperes
Phase	Single
Rotor RPM	3,000
Number of Rotor Poles	2
Engine RPM	3,000
Rated AC Frequency	50 Hz
Weight	222 Pounds
Length	25 inches (635 mm)
Width	18.5 inches (469.9 mm)
Height	16.75 inches (425.45 mm)



2.1 GENERATOR CONTROL PANEL

The following features are mounted on the generator control panel (Figure 2.1):

Figure 2.1 – Generator Control Panel



◆ 2.1.1 FUEL PRIMER

Before starting a cold engine (if it has not been started in more than two weeks), you must press this switch for approximately five seconds to bring fuel from the tank to the fuel pump. This rocker type switch springs back into its original position when you release it.

◆ 2.1.2 START/STOP SWITCH

To crank and start the engine, hold this switch in the START position. Release the switch when the engine starts. To stop an operating engine, press and hold the switch in the STOP position until the engine shuts off. The switch center position is the RUN position.

◆ 2.1.3 FUSE

The fuse protects the engine's DC control circuit against electrical overload. If the fuse element has melted open due to overloading, the engine cannot be cranked. If you must replace the fuse, use only an identical replacement.

◆ 2.1.4 MAIN BREAKER

The main breaker protects the generator's AC output circuit against overload and provides a method of turning OFF the generator's 115/230-volt AC output to the vehicle circuits. This generator has two 30-amp circuit breakers.

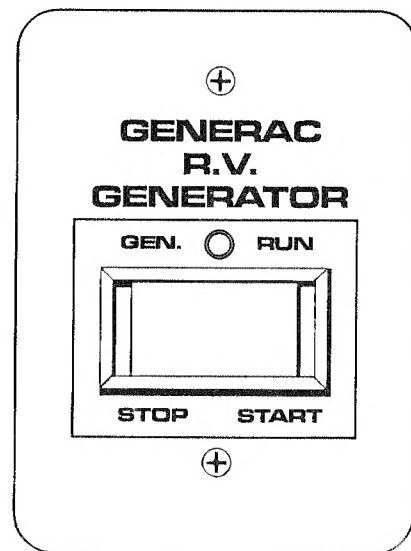
NOTE:

If this generator has been reconnected for dual voltage AC output (115/230 volts), you can install line breakers having an amperage rating that is different than that stated in Section 1.4 (Page 5). The replacement line breakers consist of two separate breakers with a connecting piece between the breaker handles (so that both breakers will operate at the same time).

2.2 OPTIONAL REMOTE START/STOP PANEL

A remote mounted Start/Stop Panel (Figure 2.2) is available that allows you to start and stop the generator engine conveniently from inside the vehicle. The model 9042 remote panel includes a Start/Stop switch and a generator run lamp.

Figure 2.2 — Optional Remote Panel (Model 9042)



2.3 AUTOMATIC CHOKE

This engine is equipped with an automatic choke that consists of two main components: a choke solenoid and prechoke.

◆ 2.3.1 CHOKE SOLENOID

During engine cranking (Start/Stop switch at START), a solid-state choke module signals the choke solenoid to activate and cycle (choke on/choke off) until the engine starts. The choke solenoid thus opens and closes the carburetor choke valve only when the engine is cranking. When the engine starts, the choke stops cycling.



◆ 2.3.2 PRECHOKE

The choke system also has a temperature-sensitive metal strip that adjusts choke valve angle according to ambient temperatures (i.e., in cold ambient temperatures, choke valve closes more). Once the engine starts, an element heats the temperature-sensitive strip to a normal operating condition, opening the choke valve. This may take about three minutes in cooler weather.

2.4 BEFORE STARTING THE ENGINE

NOTE:

Instructions and information in this manual assume the generator has been properly installed, connected, serviced, tested and adjusted by a qualified installation technician or installation contractor.

◆ 2.4.1 INSTALLATION

Generator installation must have been properly completed so it complies with all applicable codes, standards and regulations and with the manufacturer's recommendations.

◆ 2.4.2 ENGINE LUBRICATION

Have the engine crankcase properly serviced with the recommended oil before starting. Refer to Section 1.6.3 (Page 6) and Sections 3.1 and 3.2 (Page 11) for oil servicing procedures and recommendations.



Any attempt to crank or start the engine before you have properly serviced it with the recommended oil may result in an engine failure.

◆ 2.4.3 FUEL SUPPLY

The engine must have an adequate supply of proper fuel to operate. Before starting it, check that sufficient fuel is available.

NOTE:

Depending on the installation, the generator may have either a separate fuel tank, or it may "share" the vehicle engine's fuel tank.

◆ 2.4.4 COOLING AND VENTILATING AIR

Air inlet and outlet openings in the generator compartment must be open and unobstructed for continued proper operation. Without sufficient cooling and ventilating airflow, the engine/generator quickly overheats, which causes it to shut down and may damage the generator.

◆ 2.4.5 ENGINE EXHAUST GAS

Before starting the generator engine, you should be sure there is no way for exhaust gases to enter the vehicle interior and endanger people or animals. Close windows, doors and other openings in the vehicle that, if open, might permit exhaust gases to enter the vehicle.



The generator engine gives off DEADLY carbon monoxide gas through its exhaust system. This dangerous gas, if breathed in sufficient concentrations, can cause unconsciousness or even death. Never operate the generator set with the vehicle inside any garage or other enclosed area. DO NOT OPERATE THE GENERATOR IF THE EXHAUST SYSTEM IS LEAKING OR HAS BEEN DAMAGED. SYMPTOMS OF CARBON MONOXIDE POISONING ARE (a) inability to think coherently; (b) vomiting; (c) twitching muscles; (d) throbbing temples; (e) dizziness; (f) headaches; (g) weakness; and (h) sleepiness. IF YOU FEEL ANY OF THESE SYMPTOMS, MOVE INTO FRESH AIR IMMEDIATELY. IF SYMPTOMS PERSIST, GET MEDICAL HELP.

2.5 STARTING THE GENERATOR

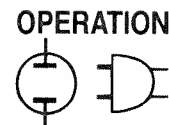
To start the generator from either the generator control panel or from the optional remote panel, proceed as follows:

1. Turn OFF electrical loads using the means provided in your vehicle (such as a main line circuit breaker or transfer switch).

NOTE:

If starting from the generator control panel, turn OFF loads by setting the generator's main circuit breaker to the OFF (or open) position. If starting from a remote panel, turn OFF loads using the means provided in the vehicle (such as a main circuit breaker). Electrical load circuits will be turned ON after the generator has started, stabilized and warmed up.

2. If you have not started the engine in more than two weeks, press the Fuel Pump Primer switch and hold it for about five seconds to prime the fuel system. However, if the engine is warm, skip Step 2.
3. Hold the engine Start/Stop switch in the START position to crank the engine. Release the switch when the engine starts.



—▲ CAUTION ▲—

▲ If the engine does not start after it has been cranking for 15 seconds, release the Start/Stop switch and try again. Holding the switch for longer than 15 seconds can damage the starter motor.

4. Let the engine run at no-load for a few minutes to stabilize and warm up.
5. Turn ON electrical loads using the means provided (such as a main circuit breaker or transfer switch).

2.6 STOPPING THE GENERATOR

1. Turn OFF all electrical loads using the means provided (such as a main circuit breaker or transfer switch).
2. Let generator run at no-load for a few minutes, to stabilize internal engine generator temperatures.
3. Place the Start/Stop switch in its STOP position.

2.7 APPLYING LOADS TO GENERATOR

When applying electrical loads to the generator, observe these guidelines:

- Before applying electrical loads, let the generator stabilize and warm up for a minute or two.
- DO NOT overload the generator.

◆ 2.7.1 LETTING THE ENGINE STABILIZE

The generator supplies correct rated voltage only at the proper governed speed. Some electrical appliances may be extremely sensitive to voltage. Incorrect voltages can damage such appliances.

If electrical loads are applied at reduced operating speeds, such loads imposed on the engine when sufficient power is not available may shorten engine life. Never turn ON electrical loads until after the generator engine has started and stabilized at no-load.

◆ 2.7.2 DO NOT OVERLOAD THE GENERATOR

You can read the rated wattage/ampere capacity of your generator on the generator data decal (see Section 1.1 on Page 4).

Applying electrical loads in excess of the unit's rated capacity will cause the engine/generator to automatically shut down.

To avoid overloading, add up the wattage of all connected electrical lighting, appliance, tool and motor loads. This total should not be greater than the generator's rated wattage capacity.

- Most lighting, appliance, tool and motor loads indicate their required watts on their nameplate or data plate. For light bulbs, simply note the wattage rating of the bulb.

- If a load does not show its rated wattage, multiply that load's rated VOLTS times AMPS to obtain WATTS.
- Induction type motors (such as those that run the vehicle's furnace fan, refrigerator, air conditioner, etc.) need about 2-1/2 times more watts of power for starting than for running (for a few seconds during motor starting). Be sure to allow for this when connecting electrical loads to the generator. First, figure the watts needed to start electric motors in the system. To that figure, add the running wattages of other items that will be operated by the generator.
- Do not apply heavy electrical loads for the first two or three hours of operation.

2.8 PROTECTION SYSTEMS

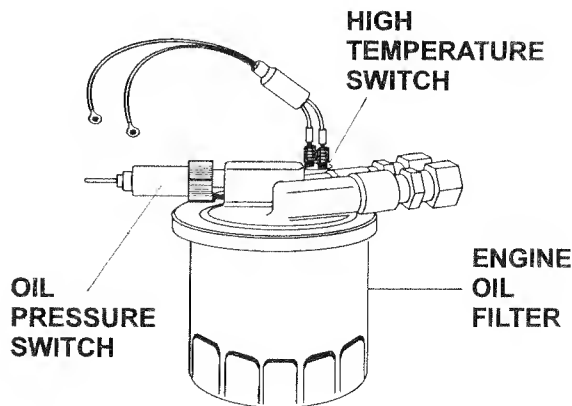
◆ 2.8.1 LOW OIL PRESSURE SWITCH

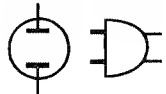
This switch (Figure 2.3) has normally open (N.O.) contacts that are held open by engine oil pressure during cranking and operating. Should oil pressure drop below a preset level, switch contacts close, and the engine automatically shuts down. The unit should not be restarted until oil is added.

◆ 2.8.2 HIGH TEMPERATURE SWITCH

This switch (Figure 2.3), which has normally open (N.O.) contacts, is mounted near the oil filter. The contacts close if the temperature should exceed approximately 284° F (140° C), initiating an engine shutdown.

Figure 2.3 – Low Oil Pressure and High Temperature Switches

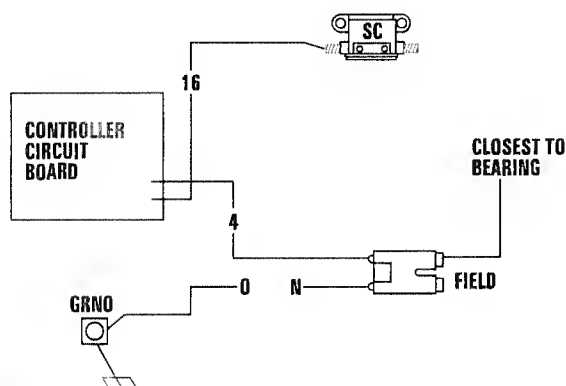




◆ 2.8.3 FIELD BOOST

The Controller Circuit Board houses a field boost diode and resistor that are not part of the automatic choke circuit. These two components are part of a “field boost” circuit (Figure 2.4). During engine cranking only, a positive DC (battery) voltage is delivered through the diode, resistor, brushes and slip rings, and the generator rotor. Application of this voltage to the rotor “flashes the field” whenever it is started. Flashing of the field each time the generator starts makes sure that a sufficiently strong magnetic field is available to produce “pickup” voltage in the stator windings.

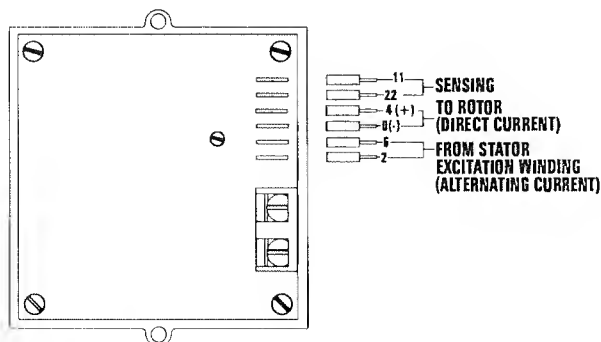
Figure 2.4 – Field Boost Circuit



◆ 2.8.4 OVERVOLTAGE PROTECTION

A solid-state voltage regulator (Figure 2.5) controls the generator's AC output voltage. This regulator supplies an excitation current to the rotor. By regulating the rotor's excitation current, the strength of its magnetic field is regulated and, in turn, the voltage delivered to connected electrical loads is controlled. When the AC frequency is 50 Hertz, voltage is regulated at 115 volts.

Figure 2.5 – Solid State Voltage Regulator



The voltage regulator also incorporates a “voltage surge protection circuit.” This circuit prevents troublesome surges in the generator AC output voltage. Voltage surge is a common cause of damage to electronic equipment.

2.9 ADDITIONAL INFORMATION

◆ 2.9.1 25-HOUR BREAK-IN PERIOD

The first 25 hours of operation is the break-in period for the generator. Properly breaking in the generator is essential to minimize fuel consumption and provide maximum engine performance. During this 25-hour break-in period, follow this procedure:

- Run the unit at varying electrical loads to help seat the engine piston rings properly.
- Check the engine oil level frequently. Add oil if needed. It is normal for the generator engine to consume more oil than is normal until the piston rings have properly seated.
- For the 75-hour operation following the break-in period, avoid light electrical loads. Load the generator at 50 percent (or more) of its rated wattage capacity. Repeated light loads during these 75 hours can cause improper seating of engine piston rings, resulting in blowby and high oil consumption.
- After operating the unit for 25 hours, complete the tasks recommended under Section 2.10.2.

◆ 2.9.2 25-HOUR CHECK-UP

After the 25-hour break-in period, contact a Generac Authorized Service Dealer for the following maintenance. The vehicle owner is responsible for any charges:

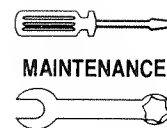
- Change the engine crankcase oil and oil filter.
- Inspect the cooling and ventilation openings.
- Check the engine ignition system.
- Inspect the entire electrical system.
- Inspect the engine exhaust system.

◆ 2.9.3 OPERATION IN HIGH GRASS OR BRUSH

⚠ WARNING ⚠



Never operate the generator while the vehicle is parked over high grass, weeds, brush, leaves or any other combustible substance. Such materials can ignite and burn from the heat of the exhaust system. The generator exhaust system becomes extremely hot during operation and remains hot for a long time after it has shut down.



3.1 CHECKING THE ENGINE OIL LEVEL

For oil capacities and requirements, see “Engine Oil Requirements,” Section 1.6.2 (Page 6). Check the engine crankcase oil level at least every eight hours of operation, or before you use it. To check the engine oil level, proceed as follows (see Figure 3.1):

1. Be sure the generator is as level as possible.
2. Remove the dipstick and wipe it dry with a clean, lint-free cloth.
3. Install and tighten the dipstick cap; then, remove it again. The oil level should be at the dipstick “Full” mark.
4. If necessary, remove the oil fill cap on the rocker cover and slowly add oil until it reaches the dipstick “Full” mark. **DO NOT FILL ABOVE THE “FULL” MARK.**



Never operate the engine with the oil level below the “Add” mark on the dipstick. Doing this could damage the engine.

5. Install and tighten the oil fill cap and the dipstick before operating the engine.

3.2 CHANGING THE ENGINE OIL AND/OR OIL FILTER

- Change the **engine oil** after the first 25 hours of operation (after the 25-hour break-in period, see Section 2.9.1, Page 10). Thereafter, change the oil every 50 operating hours. Change the oil more frequently if operating consistently under heavy load or at high ambient temperatures.
- Change the **engine oil filter** after the first 25 hours of operation, and every 100 operating hours thereafter.

To change the oil and/or oil filter, proceed as follows:

1. Run the engine until it is thoroughly warmed up (at least five minutes) then shut OFF the engine.
2. With the engine still warm from running, remove the oil drain plug (Figure 3.1). Drain the oil into a suitable container.
3. After the oil has drained, replace the oil drain plug. **(If only changing the oil, go to step 7.)**
4. With the oil drained, remove the old oil filter by turning it counterclockwise (Figure 3.2).
5. Apply a light coating of clean engine oil to the gasket of the new filter.
6. Screw the new filter on by hand until its gasket lightly contacts the oil filter adapter. Then, tighten the filter an additional 3/4 to one turn.

7. Remove the dipstick and fill crankcase with the proper type and amount of recommended oil (see Section 1.6.2, Page 6). The engine crankcase can hold about 1.4 liters. **DO NOT FILL ABOVE THE “FULL” MARK.**
8. Install and tighten the dipstick before operating the engine.
9. Start the engine and check for leaks.

NOTE:

Check the oil level and fill to the “FULL” mark after checking for leaks. The filter will retain some oil.

Figure 3.1 — Oil Dipstick/Fill Tube and Location of Oil Drain Plug

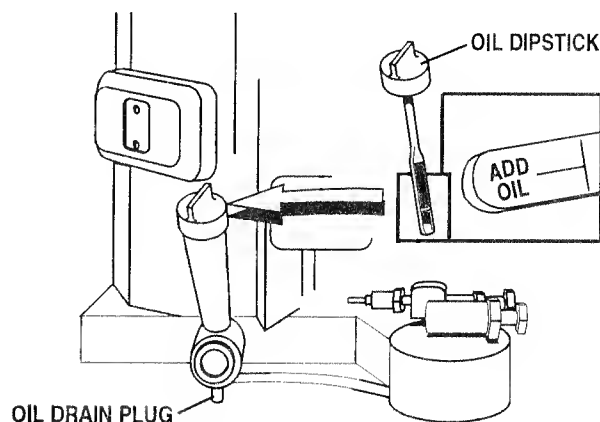
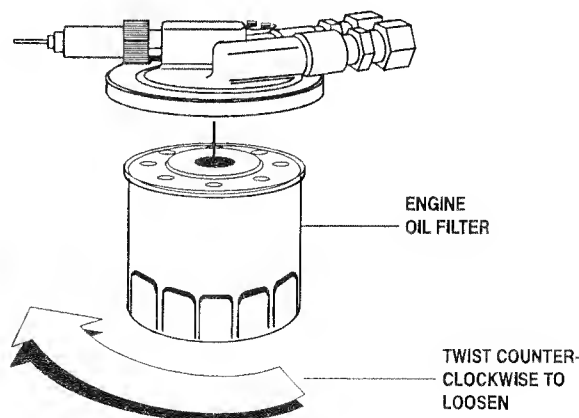
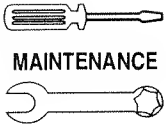


Figure 3.2 — Engine Oil Filter





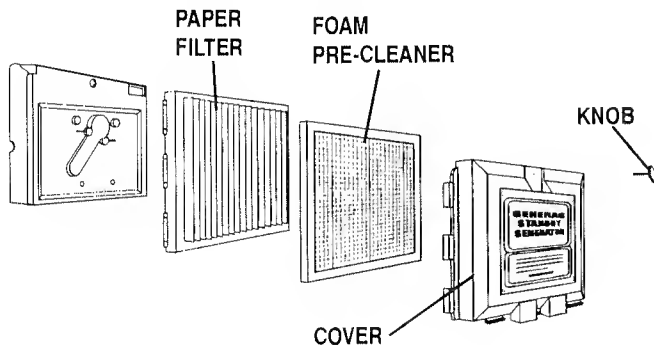
3.3 MAINTAINING THE ENGINE AIR CLEANER

◆ 3.3.1 CLEANING THE FOAM PRECLEANER

Clean and re-oil the foam precleaner every three months or every 25 hours of operation, whichever occurs first. Service the foam precleaner more frequently if operating the generator in extremely dusty or dirty conditions. Use the following procedure (Figure 3.3):

1. Turn the knob counterclockwise to loosen.
2. Remove the cover, foam precleaner and paper filter.
3. Remove the foam precleaner from the cover.
4. Wash the foam precleaner in liquid detergent and water.
5. Wrap the foam precleaner in a clean cloth and gently squeeze it dry.
6. Saturate the foam precleaner in clean engine oil. Gently squeeze it in a clean cloth to remove excess oil and to distribute oil (DO NOT TWIST).
7. Install the foam precleaner into the cover, followed by the paper filter. Tabs at edges of paper filter must lock into slots on cover.
8. Install the cover, foam precleaner and paper filter.
9. Replace knob to retain the filter in place.

Figure 3.3 – Engine Air Cleaner

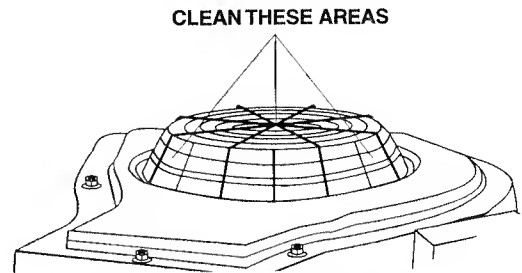


3.4 CLEAN AIR INTAKE SCREEN

Clean all foreign material from the air intake screen (Figure 3.4) at least once every 100 hours of operation. Clean more often if necessary.

Inspect the area around the generator exhaust muffler periodically and remove all grass, leaves, dirt, etc., from this area.

Figure 3.4 – Cleaning Air Intake

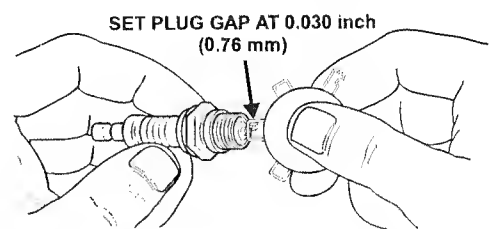


3.5 CHECKING THE ENGINE SPARK PLUG

Clean the spark plug and reset the spark plug gap every 100 hours of operation.

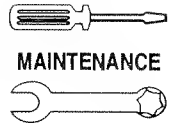
1. Clean the area around the base of the spark plug to keep dirt and debris out of the engine. Clean by scraping or washing using a wire brush and commercial solvent. Do not blast the spark plug to clean.
2. Remove the spark plug and check the condition. Replace the spark plug if worn or if reuse is questionable.
3. Check the spark plug gap using a wire feeler gauge. Adjust the gap to 0.030 inch (0.76 mm) by carefully bending the ground electrode (Figure 3.5).

Figure 3.5 – Setting the Spark Plug Gap



⚠ CAUTION ⚠

⚠ Sparking can occur if the wire terminal does not fit firmly on the spark plug terminal end. If necessary, re-form the wire terminal to obtain a tight fit.

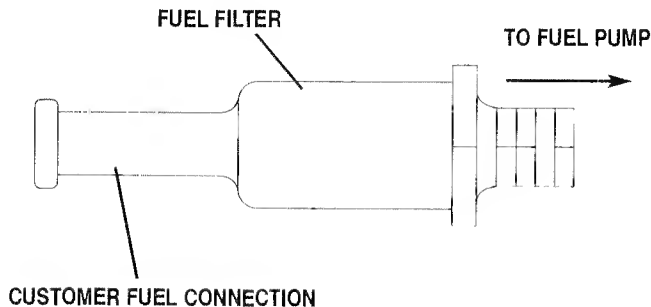


MAINTENANCE

3.6 FUEL FILTER (GASOLINE ONLY)

Remove and replace the fuel filter (Figure 3.6) once each year or every 100 hours of operation, whichever comes first.

Figure 3.6 – Fuel Filter



3.7 SPARK ARRESTOR MUFFLER

If the generator is not equipped with a spark arrestor exhaust muffler and is to be used on any forest covered, brush covered or grass covered unimproved land, you may have to install a spark arrestor. The spark arrestor must be maintained in effective working order by the vehicle owner/operator.

For assistance in ordering, installing and maintaining spark arrestor exhaust mufflers, contact your nearest Generac Authorized Service Dealer.

Exhaust mufflers supplied by Generac are spark arrestor types. Generac exhaust mufflers for recreational vehicle generators do not have a spark arrestor screen, but are of the more efficient "toroid" or "swirl" type. To remove carbon and combustion deposits from such mufflers, remove the plug from the muffler and run the engine for approximately 15 minutes. Shut down the engine, let the muffler cool and install the plug.

⚠ WARNING ⚠

⚠ Be sure to reinstall the muffler plug tightly. Engine vibration could cause a loose plug to fall out. Without the plug in place, hot engine exhaust is directed out the opening. This hot exhaust, depending on the installation, could be directed to areas not able to withstand the extreme heat such as wooden floor boards or other flammable material. This could result in a fire.

3.8 CLEANING THE GENERATOR

Keep the generator set as clean and dry as possible. Protect the unit against excessive dust, dirt, corrosive vapors, road splash, etc. Permitting dirt and moisture to accumulate on generator windings will have an adverse effect on the insulation resistance of those windings.

When moisture is allowed to remain in contact with windings, some of the moisture will be retained in voids and cracks in the insulation. This causes a reduced insulation resistance and will eventually cause problems. Dirt will make the problem worse, since dirt tends to hold moisture in contact with windings. Salt (as from sea air) also will worsen the problem since it tends to absorb moisture from the air. Salt and moisture, when combined, form a good electrical conductor.

⚠ CAUTION ⚠

⚠ Do NOT use a forceful spray of water to clean the generator. Water will enter the generator interior and cause problems, and may also contaminate the generator fuel system.

3.9 BATTERY MAINTENANCE

All lead-acid batteries will discharge when not in use. The generator battery should be inspected as follows:

◆ 3.9.1 WEEKLY

- Inspect the battery posts and cables for tightness and corrosion. Tighten and clean as necessary.
- Check the battery fluid level of unsealed batteries and, if necessary, fill with Distilled Water Only. Do not use tap water in batteries.

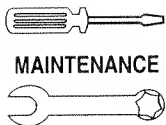
◆ 3.9.2 EVERY SIX MONTHS

- Have the state of charge and condition checked. This should be done with an automotive-type battery hydrometer.

NOTE:

Servicing of the battery is to be performed or supervised by personnel knowledgeable of batteries and the required precautions. Keep unauthorized personnel away from batteries.

Damage will result if the battery connections are made in reverse.





MAINTENANCE

Section 3 – Maintenance

Generac Q-70G Recreational Vehicle Generator


DANGER


 Do not dispose of the battery in a fire. The battery is capable of exploding. Storage batteries give off explosive hydrogen gas. This gas can form an explosive mixture around the battery for several hours after charging. The slightest spark can ignite the gas and cause an explosion. Such an explosion can shatter the battery and cause blindness or other injury. Any area that houses a storage battery must be properly ventilated. Do not allow smoking, open flame, sparks, or any spark producing tools or equipment near the battery. Discharge static electricity from your body before touching the battery by first touching a grounded metal surface.

 A battery presents a risk of electrical shock and high short circuit current. The following precautions are to be observed when working on batteries:

- Remove watches, rings or other metal objects;
- Use tools with insulated handles;
- Wear rubber gloves and boots;
- Do not lay tools or metal parts on top of the battery;
- Disconnect any charging source prior to connecting or disconnecting battery terminals; and
- Do not use any jumper cables or booster battery to crank and start the generator engine. If any battery has discharged, remove it for recharging.

WARNING

 Do not open or mutilate the battery. Released electrolyte has been known to be harmful to the skin and eyes, and to be toxic.

 The electrolyte is a dilute sulfuric acid that is harmful to the skin and eyes. It is electrically conductive and corrosive. The following procedures are to be observed:

- Wear full eye protection and protective clothing;
- Where electrolyte contacts the skin, wash it off immediately with water;
- Where electrolyte contacts the eyes, flush thoroughly and immediately with water and seek medical attention; and
- Spilled electrolyte is to be washed down with an acid neutralizing agent. A common practice is to use a solution of 1 pound (500 grams) bicarbonate of soda to 1 gallon (4 liters) or water. The bicarbonate of soda solution is to be added until the evidence of reaction (foaming) has ceased. The resulting liquid is to be flushed with water and the area dried.

3.10 MAJOR SERVICE MANUAL

To obtain a service manual for your generator, contact Generac or your nearest Generac Authorized Service Dealer. Make sure to identify your MODEL NUMBER and SERIES.

3.11 DRIVE BELT

The engine drives the generator rotor by means of a pulley and drive belt arrangement. The drive belt and pulleys are warranted for the life of the generator. Drive belt tension was properly adjusted before the unit was shipped from the factory. If you suspect that drive belt tension is incorrect, contact a Generac Authorized Service Dealer.

3.12 EXERCISING THE GENERATOR

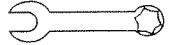
Generac recommends that you start and operate the generator at least once every seven days. Let the unit run for at least 30 minutes to “exercise” the engine.

3.13 OUT OF SERVICE PROCEDURE

◆ 3.13.1 REMOVAL FROM SERVICE

If you cannot exercise the generator every seven days, and it is to be out of service longer than 30 days, prepare the generator for storage as follows:

1. Start the engine and let it warm up.
2. Close the fuel shutoff valve in the fuel supply line and allow the unit to shut down.
3. While the engine is still warm from running, drain the oil completely. Refill the crankcase with SAE 10W-30 oil having API classification “For Service SF.”
4. Attach a tag to the engine indicating the viscosity and classification of the oil in the crankcase.
5. Remove the spark plug and pour two or three tablespoons of clean, fresh engine oil into the spark plug threaded openings. Reinstall and tighten the spark plug.
6. Remove the battery and store it in a cool, dry room on a wooden board. Never store the battery on any concrete or earthen floor.
7. Clean and wipe the entire generator.



◆ 3.13.2 RETURN TO SERVICE

To return the unit to service after storage, proceed as follows:

1. Check the tag on the engine for oil viscosity and classification. Verify that the correct recommended oil is used in the engine (see Section 1.5.4, Page 6). If necessary, drain and refill with the proper oil.
2. Check the state of the battery. Fill all cells of unsealed batteries to the proper level with distilled water. DO NOT USE TAP WATER IN THE BATTERY. Recharge the battery to 100 percent state of charge, or, if defective, replace the battery.
3. Clean and wipe the entire generator.
4. Reconnect the battery. Observe battery polarity. Damage may occur if the battery is connected incorrectly.
5. Turn OFF all electrical loads. Add fuel if necessary and then start the engine.
6. Allow the unit to warm up thoroughly.
7. Apply electrical loads to at least 50 percent of the unit's rated wattage capacity.
8. When the engine is thoroughly warmed up, shut it down.
9. Your generator is now ready for service.

3.14 WATTAGE REFERENCE GUIDE

	Running Watts
Battery Charger	500
Belt Sander (3").....	1000
Chain Saw	1200
Circular Saw (6-12")	800 to 1000
Disc Sander (9")	1200
Hand Drill (1")	1100
Hedge Trimmer	450
Impact Wrench	500
Lawn Mower	1200
Electric Range (one element)	1500
Television	1750 to 2000
Coffee Maker	1000
Electric Skillet.....	1250
Hair Dryer.....	1200
Light Bulb	100
Microwave Oven	700
Oil Burner on Furnace	300
Oil Fired Space Heater (140,000 Btu)	400
Radio	50 to 200
Slow Cooker	200
*Furnace Fan (1/3 HP).....	1200
*Refrigerator	600
*Air Conditioner (12,000 Btu).....	1700
*Compressor (1HP).....	2000
*Deep Freeze	500
*Milk Cooler	1100
*Submersible Pump (1-1/2 HP).....	2800
*Submersible Pump (1 HP).....	2000
*Paint Sprayer, Airless (1/3 HP)	600
*Table Saw (10")	1750 to 2000

* Allow 2-1/2 times the listed watts for starting these devices.



Section 4 – Troubleshooting

Generac Q-70G Recreational Vehicle Generator

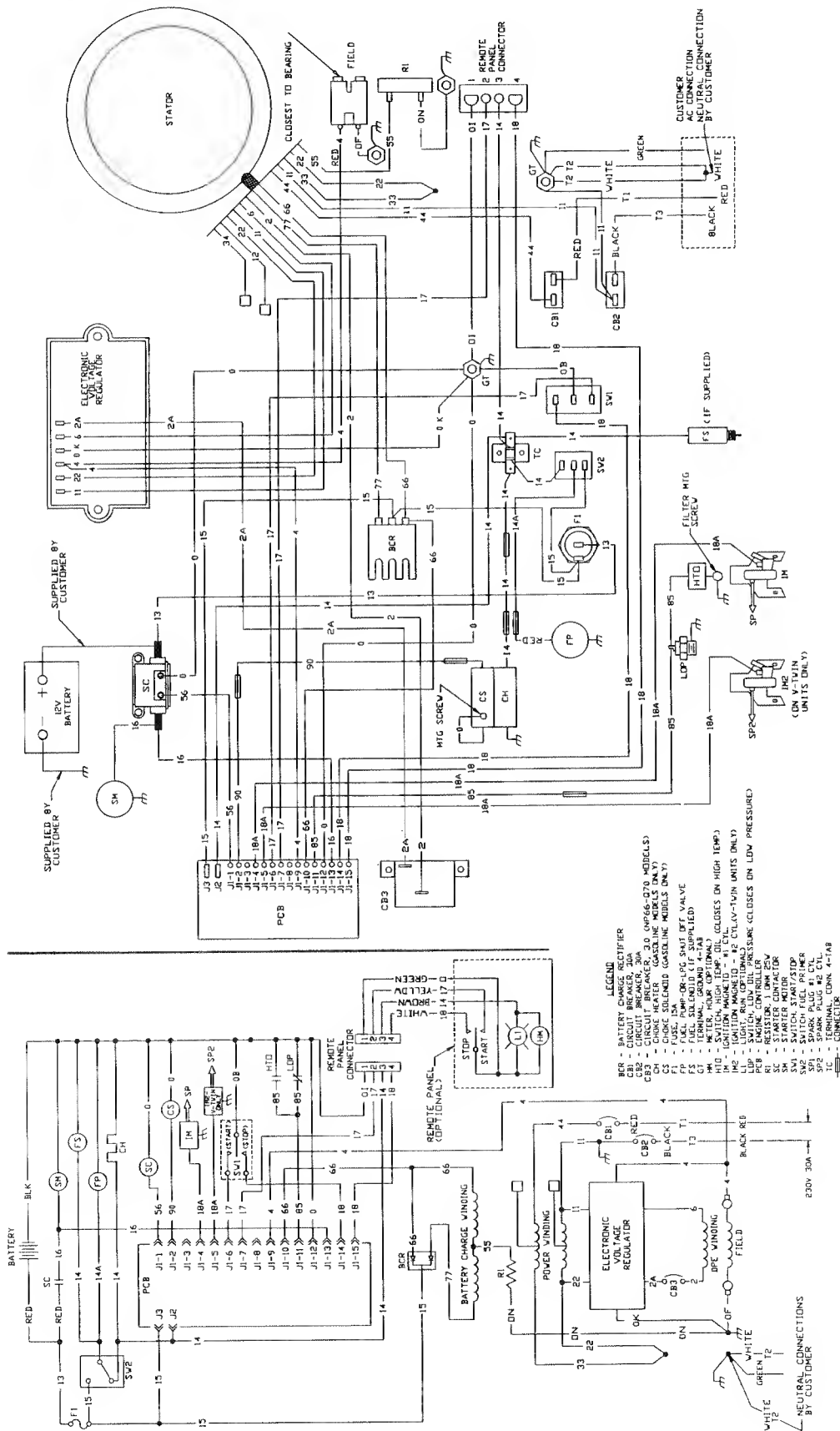
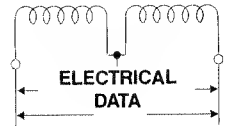
4.1 TROUBLESHOOTING GUIDE

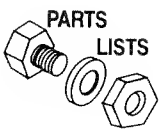
PROBLEM	CAUSE	CORRECTION
The engine will not crank.	<ol style="list-style-type: none"> 1. Fuse blown 2. Loose, corroded or defective battery cables 3. Defective engine Start/Stop switch 4. Defective starter contactor 5. Defective starter motor 6. Low or defective battery 	<ol style="list-style-type: none"> 1. Replace fuse. 2. Tighten, clean or replace as necessary. 3. Replace Start/Stop switch. 4. Replace contactor. 5. Replace starter motor. 6. Charge or replace battery.
The engine cranks but will not start.	<ol style="list-style-type: none"> 1. Out of fuel 2. Defective fuel pump 3. Open #14 wire from engine control board 4. Flooded engine 5. Defective spark plug(s) 6. Fuel line shut-off closed 7. Plugged fuel filter 	<ol style="list-style-type: none"> 1. Replenish fuel. 2. Replace fuel pump. 3. Check connections and insulation of #14 wires. 4. Wait 5-10 minutes before trying. 5. Clean, re-gap or replace plug(s). 6. Open fuel line shut-off. 7. Clean or replace fuel filter.
The engine starts hard and runs rough.	<ol style="list-style-type: none"> 1. Air cleaner plugged or damaged 2. Defective spark plug(s) 	<ol style="list-style-type: none"> 1. Check, clean or replace air cleaner. 2. Clean, re-gap or replace plug(s).
The engine starts, but shuts down when the Start/Stop switch is released.	<ol style="list-style-type: none"> 1. Engine oil level low 2. Defective low oil pressure switch 3. Defective high temperature switch 4. Defective engine control board 5. Overheated engine 	<ol style="list-style-type: none"> 1. Check oil and add oil as needed. 2. Replace pressure switch. 3. Replace temperature switch. 4. Replace control board. 5. Check that the airflow openings are adequate.
The Start/Stop switch is set to Stop, but the engine continues to run.	<ol style="list-style-type: none"> 1. Defective Start/Stop switch 2. Open/Disconnected #18 wire between Start/Stop switch and engine control board 3. Open/Disconnected #0 wire between Start/Stop switch and engine control board 4. Defective engine control board 	<ol style="list-style-type: none"> 1. Replace switch. 2. Reconnect or close wire. 3. Reconnect or close wire. 4. Replace control board.
There is no AC output from the generator.	<ol style="list-style-type: none"> 1. Main line circuit breaker open 2. Fault with vehicle circuit breaker and/or fuses 3. Transfer switch set to NORMAL 4. Start switch not held long enough to flash the field 5. Generator internal failure 	<ol style="list-style-type: none"> 1. Reset circuit breaker to ON (or closed). 2. Reset and replace if necessary. 3. Set switch to GENERATOR. 4. Stop, then restart the engine (Hold Start switch for at least 2 seconds). 5. Contact a Generac Authorized Service Dealer.

Section 5 – Electrical Data

Generac Q-70G Recreational Vehicle Generator

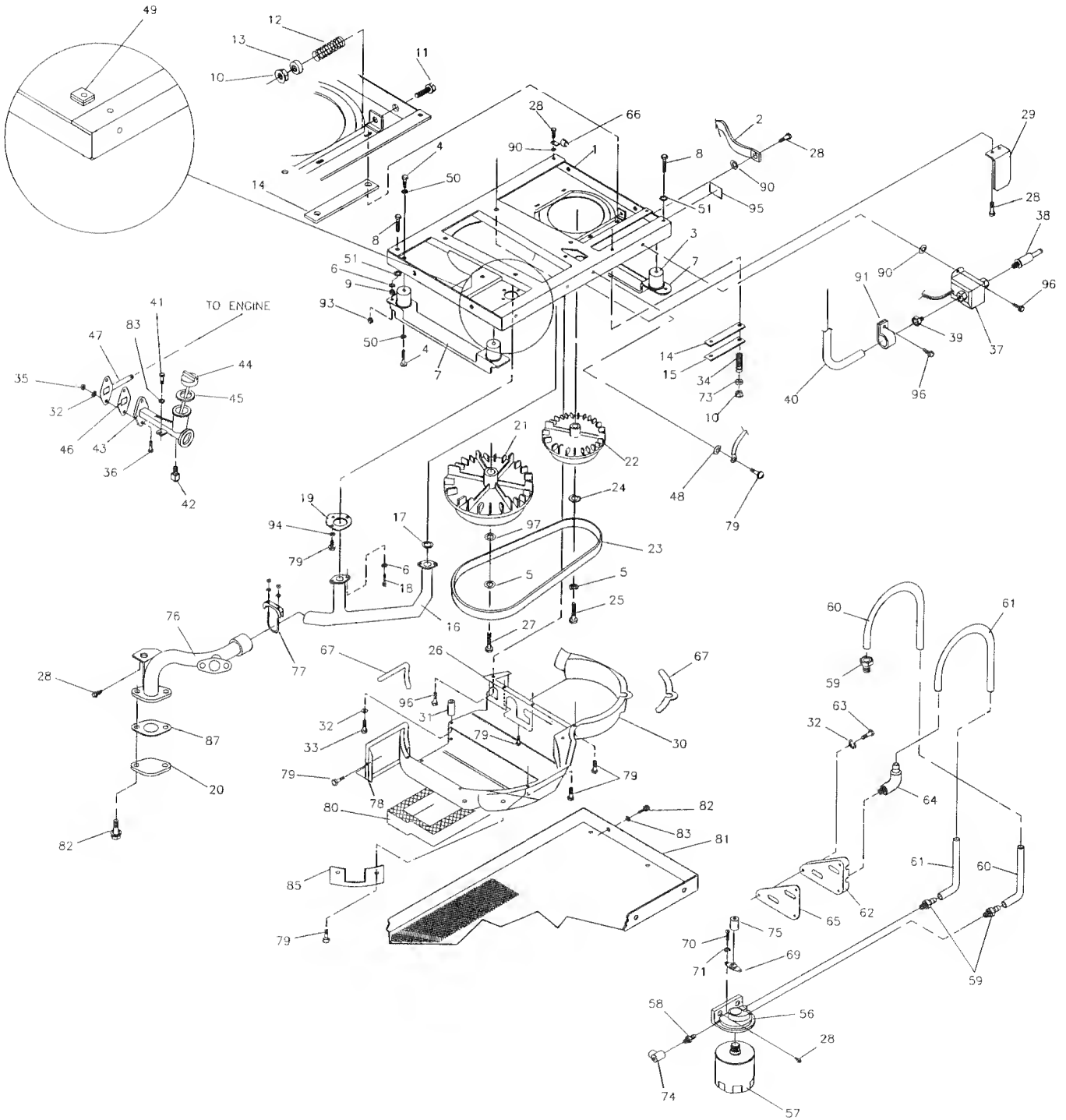
Electrical Schematic and Wiring Diagram – Drawing No. A2776





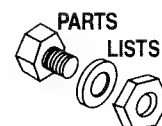
Section 6 – Exploded Views and Parts Lists

Generac Q-70G Recreational Vehicle Generator Base and Pulleys – Drawing No. A2753-F

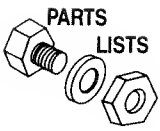


Section 6 – Exploded Views and Parts Lists

Generac Q-70G Recreational Vehicle Generator Base and Pulleys – Drawing No. A2753-F

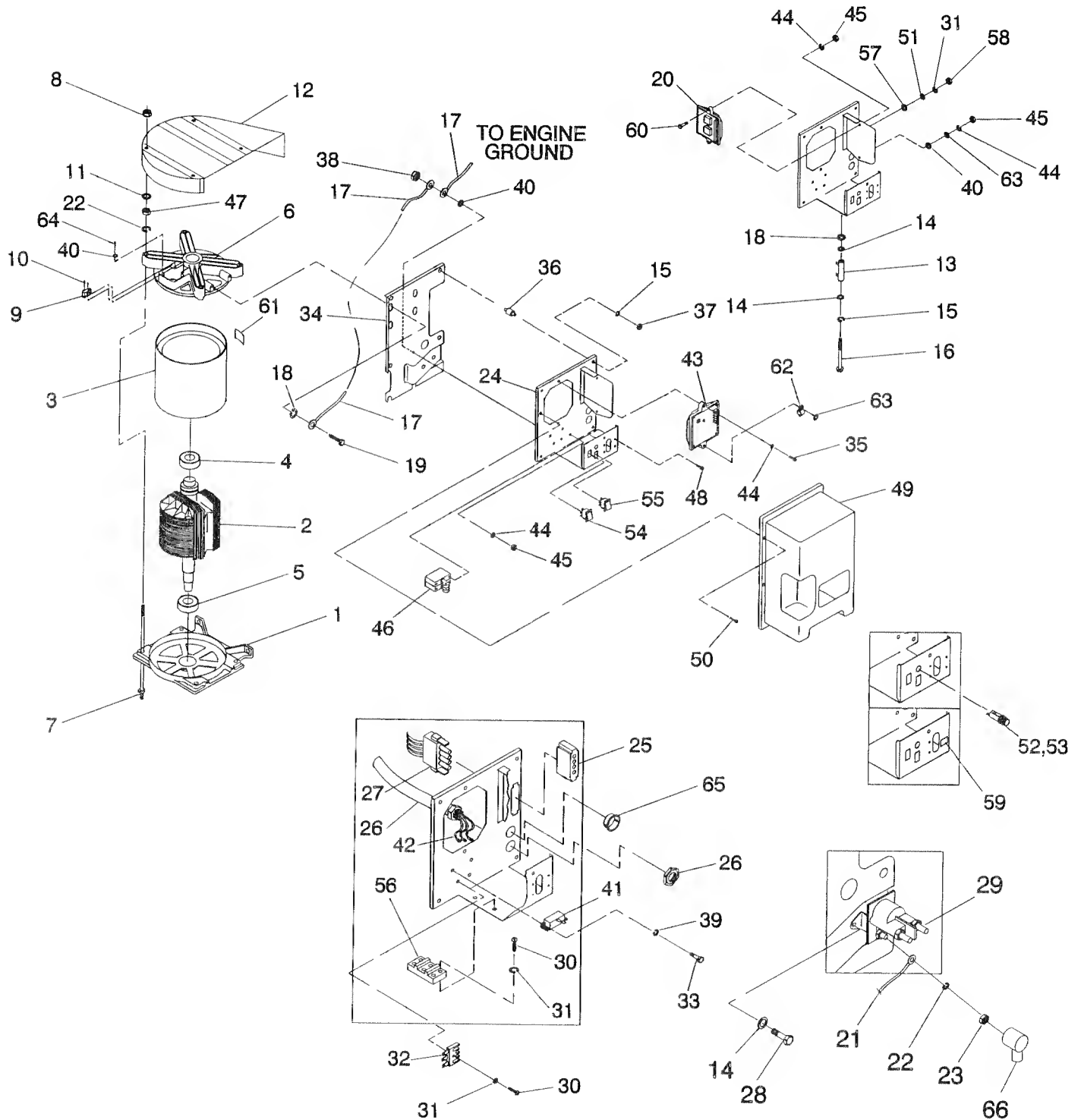


ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
1	86318	1	BASE, MOUNTING	44	74958	1	CAP & DIPSTICK ASSEMBLY
2	90141	1	GROUND CABLE	45	67871	1	O-RING, CAP
3	46911	4	MOUNT, (RUBBER)	46	A5508	1	OIL FILL TUBE GASKET
4	25017	8	CAPSCREW, HEX HD.3/8"-16 X 1/2"	47	75711	1	PIPE, OIL DRAIN ADAPTOR
5	46526	2	LOCKWASHER-M10	48	A8475	1	SPECIAL LOCK WASHER, M5
6	22129	6	LOCKWASHER, 5/16" -M8	49	A5802	1	TINNERMAN CLIP
7	72391	2	SKID, RUBBER MOUNT	50	22237	8	LOCKWASHER, 3/8"
8	77603	2	SAFETY BOLT 5/16"-18 x 3 1/2"	51	22145	2	FLATWASHER, 5/16" -M8
9	22259	2	NUT, HEX-5/16"-18	56	73179	1	OIL FILTER SUPPORT
10	52858	6	NUT, FLANGED LOCK-M8-1.25	57	70185	1	FILTER, OIL (FRAM#PH3614)
11	51730	2	CAPSCR. HEX HD.-M8-1.25 x 60mm	58	60108	1	10 PSI-SWITCH, OIL PRESSURE
12	29459	2	SPRING, BELT TENSION	59	74948	3	FITTING-5/16"
13	75215	2	WASHER, SPRING CNTR	60	74950	1	TUBE, OUTER OIL
14	73146	4	SLIDE (NYLON)	61	74951	1	TUBE, INNER OIL
15	75209	2	SUPPORT, NYLON SLIDE	62	73134	1	ADAPTOR, OIL FILTER ADAPTER
16	73174	1	MANIFOLD, EXHAUST	63	38750	3	CAPSCREW, HEX HD.- M6-1.00 x 30mm
17	79678	2	RING, SEALING	64	74949	1	FITTING, BARBED 90-DEGREE-5/16"
18	40976	4	SHCS, M8-1.25 x 20mm	65	68548	1	GASKET, OIL FILTER ADAPTER
19	72383	2	GASKET, COLLECTOR PAN	66	C4006	1	CABLE, BATTERY
20	90859	1	COVER PLATE -EXTERNAL	67	29289	--	TAPE, FOAM-1/16" THICK x 8'
21	75224D	1	PULLEY, ENGINE	69	75281	1	SWITCH, HIGH TEMPERATURE
22	73106D	1	PULLEY, ALT.	70	C1085	2	SCREW, PAN HEAD-M3-0.50 x 8mm
23	75216	1	BELT (POLY V 4L)-40"	71	43182	2	LOCKWASHER-M3
24	49451	1	WASHER, PULLEY RETAINER, 7GA. 0.41" x 1.62"	73	75237	4	WASHER, SPRING RETAINER
25	42633	1	HHCS, 3/8"-24 X 1" (GRADE 5)	74	77681	1	CAP, VINYL-LOS-2 WIRE
26	77017	1	GUIDE, BLOWER HOUSING	75	75474	1	CAP, VINYL-17D x 42L x 2A
27	73118	1	CAPSCR., HEX HD.-3/8"-24 x 2-1/4"	76	90800	1	ELBOW, EXHAUST
28	74906	7	TAPTITE, M6-1.00 x 20mm	77	94670	1	CLAMP, EXHAUST
29	91123	1	BRACKET-FUEL PUMP	78	75226	1	COVER, AIR
30	72375	1	HOUSING, BLOWER	79	56893	23	CRIMPTITE, NO. 10-24 x 1/2"
31	73185	1	SPACER, BLOWER HOUSING 2-3/8"	80	75229	1	SLIDE PAN, GASKET
32	22097	7	LOCKWASHER, 1/4"-M6	81	75227	1	SLIDE PAN
33	77682	1	CAPSCR. HEX HD.-M5-0.80 x 80mm	82	79246	4	CAPSCREW, HEX HEAD- M6-1.00 x 16mm WITH LOCK WASHER
34	75242	4	SPRING, GENERATOR SET MT	83	22473	5	FLATWASHER, 1/4" -M6
35	49813	2	NUT, HEX M6 x 1.0mm	85	72384C	1	COVER, EXHAUST OUTLET
36	45757	2	CAPSCREW, HEX HD.- M6-1.0 x 25mm	87	77643	1	GASKET, EXHAUST OUTLET
37	90475	1	FUEL PUMP	90	A1658	3	LOCKWASHER, SPECIAL 1/4"
38	87769	1	FUEL FILTER	91	90088	1	CLAMP, VINYL COATED
39	87768	1	FITTING-1/8" PIPE TO 1/4" TUBE	93	81105	2	FLANGE NUT, (SPECIAL) 5/16"-18
40	87770	1	FUEL LINE	94	23897	6	FLAT WASHER, #10 -M5
41	22413	1	CAPSCREW, HEX HD.-1/4"-20 x 1"	95	67210A	1	DECAL-GROUND
42	26925	1	PIPE PLUG 3/8" SQ. HD.	96	45756	9	TAPTITE, M6-1.00 x 10mm
43	75710A	1	FILL TUBE & PLUG	97	22131	1	FLATWASHER, M10

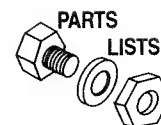


Section 6 – Exploded Views and Parts Lists

Generac Q-70G Recreational Vehicle Generator Alternator and Control Panel – Drawing No. A2754-H



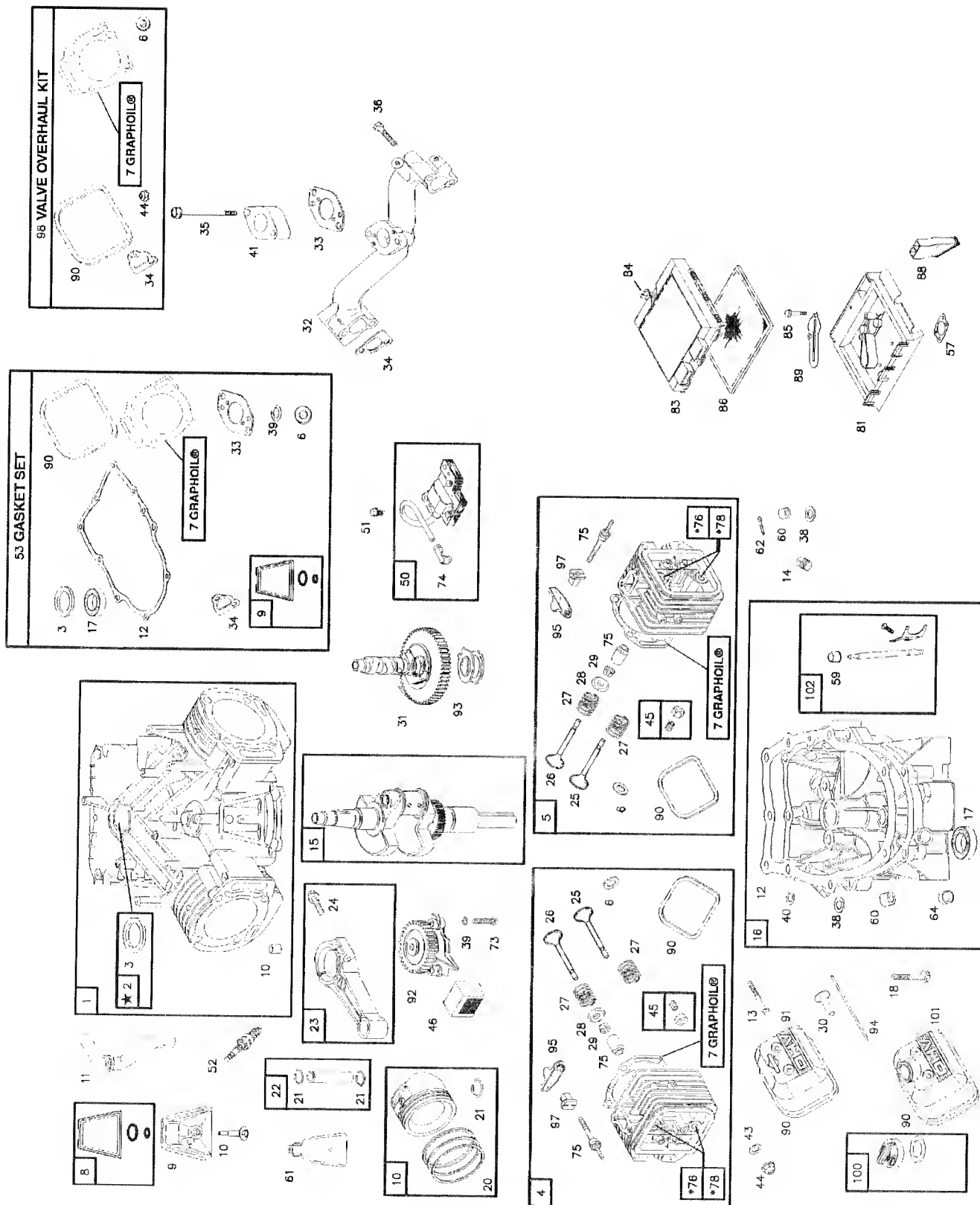
Section 6 — Exploded Views and Parts Lists
Generac Q-70G Recreational Vehicle Generator
Alternator and Control Panel – Drawing No. A2754-H



ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
1	75995	1	LOWER BEARING CARRIER	34	86317A	1	PANEL SUPPORT BRACKET
2	73163H	1	ROTOR ASSEM.	35	75235	2	M5-0.8 x 30 LG. CAPSCREW
3	21441H	1	STATOR ASSEM.	36	82737	4	VIBRATION MOUNT
4	73159	1	BALL BEARING	37	49813	4	M6-1.0 HEX NUT
5	31971	1	BALL BEARING	38	49815	1	M5-08 x 16 LG. HEX HD. CAPSCR.
6	72379-B	1	UPPER BEARING CARRIER	39	43182	2	M3-LOCK WASHER
7	77006	4	STUD-STATOR	40	A8475	3	M5-SPECIAL LOCK WASHER
8	52858	4	M8-1.25 FLANGE LOCK NUT	41	54502	1	C/BREAKER 3.0A
9	66386	1	BRUSH HOLDER	42	94192	1	HARNESS, CUSTOMER CONNECTION
10	66849	2	M5-0.8 x 16 LG. TAPTITE	43	83049	1	REGULATOR VOLTAGE
11	27756	4	NYLON WASHER	44	22152	6	M5-LOCK WASHER
12	86314	1	GENERATOR TOP HOUSING	45	51716	4	M5-0.8 HEX NUT
13	75234	1	RESISTOR	46	82081	1	CIRCUIT BREAKER 30A. 2P
14	22473	4	¼" / M6-FLAT WASHER	47	45771	4	M8-1.25 HEX NUT
15	22097	5	¼" / M6-LOCK WASHER	48	25105	4	#6-32 x ¼" SCREW W/LOCK WASHER
16	74095	1	M6-1.0 x 60 LG. CAPSCREW	49	86315	1	PANEL COVER
17	90141	2	GROUND CABLE	50	90734	4	M4-0.7 x 12 LG. CAPSCR.W/LOCK- WASHER & FLAT WASHER
18	A1658	2	SPECIAL LOCK WASHER, ¼"	51	22985	1	#6-FLAT WASHER
19	74906	4	M6-1.0 x 20 LG. TAPTITE	52	32300	1	FUSE HOLDER
20	92234	1	CONTROLLER P.C.B.	53	22676	1	FUSE AGC-15A.
21	10_-74260	1	STARTER CABLE	54	87798	1	SWITCH S.P.D.T. 6A.-(START-STOP)
22	22129	6	5/16" / M8 LOCKWASHER	55	92113	1	SWITCH S.P.D.T.-(FUEL PUMP)
23	22259	2	5/16"-18 HEX NUT	56	75210-A	1	TERMINAL BLOCK
24	86316	1	PANEL SHEET METAL	57	A8475-A	1	#8 SPECIAL LOCK WASHER
25	53650	1	4-PIN CONNECTOR	58	51715	1	M4-0.7 HEX NUT
26	C4258	1	CONDUIT ASSEMBLY	59	90157	1	DECAL, CB RATING 30A.
27	75244	1	ASSEMBLY, REMOTE CABLE	60	55440	2	M5-0.8 x 25, CAPSCREW
28	66476	2	M6-1.0 x 12 LG CAPSCREW- W/LOCKWASHER	61	94191	1	DECAL, CUSTOMER CONNECTION
29	86729	1	STARTER CONTACTOR	62	31791	1	CLAMP, HOSE
30	75476	4	M4-0.7 x 16 LG. CAPSCREW	63	23897	3	#10/ M5-FLAT WASHER
31	22264	4	#8/ M4-LOCK WASHER	64	74908	1	M5-0.8 x 10 LONG TAPTITE
32	65795	1	BATTERY CHARGER RECTIFIER	65	23484-S	1	BUSHING
33	90987	2	M3-0.5 x 12 LG. PPHMS	66	75763	1	BOOT, BATTERY CABLE

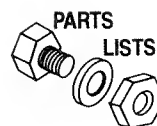
Section 6 – Exploded Views and Parts Lists

Generac Q-70G Recreational Vehicle Generator
Engine – Drawing No. 79216-E

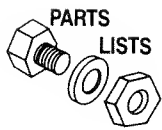


Section 6 – Exploded Views and Parts Lists

Generac Q-70G Recreational Vehicle Generator
Engine – Drawing No. 79216-E

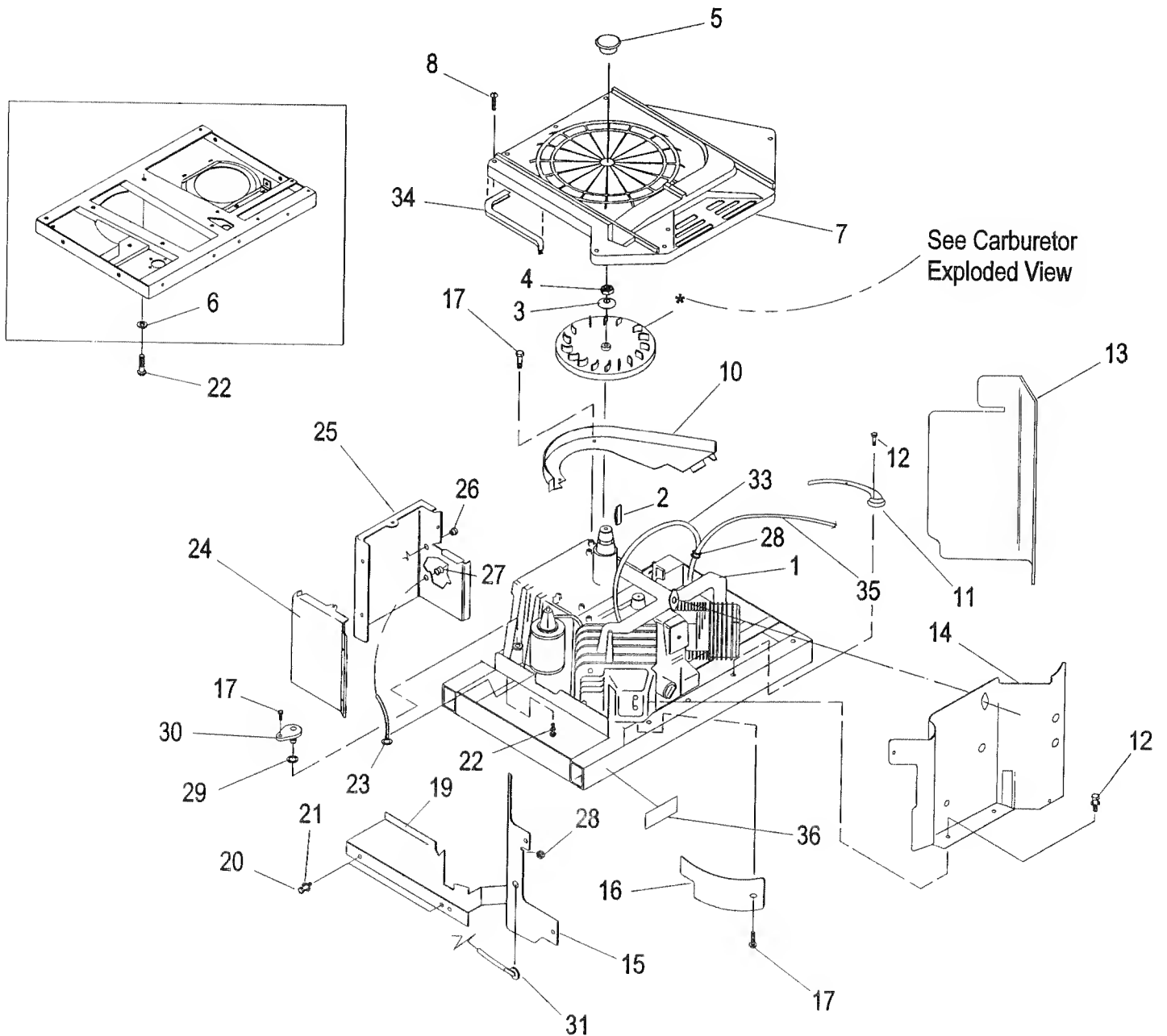


ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
1	69331	1	CYLINDER ASSEMBLY	43	75253	4	WASHER VALVE COVER SEAL
2	69333	1	SLEEVE BEARING	44	67885	4	M6 NYLON NUT
3	67805	1	OIL SEAL	45	75254	4	VALVE ADJUST SCREW
4	79234	1	NO. 1 CYLINDER HEAD ASSEMBLY	46	70535	1	OIL SCREEN
5	79235	1	NO. 2 CYLINDER HEAD ASSEMBLY	47	C2881	1	STARTER MOTOR (NOT SHOWN)
6	70169	4	SEALING WASHER	51	72536	4	IGNITION ARMATURE SCREW
7	69332	2	CYLINDER HEAD GASKET	52	72347	2	SPARK PLUG
8	104 85110	1	BREATHER ASSEMBLY	53	75258	1	ENGINE GASKET KIT
9	72315	1	BREATHER GASKET	57	66480	1	AIR CLEANER GASKET
10	89967	1	BREATHER SCREW	59	72361	1	GOVERNOR SHAFT BUSHING
11	70596	1	BREATHER TUBE	60	72362	1	GOVERNOR SHAFT BUSHING
12	69336	1	OIL SUMP GASKET	61	70199	1	BREATHER BAFFLE
13	69325	8	CYLINDER HEAD BOLT	62	72366	1	COTTER PIN
14	67888	2	3/8" NPT OIL DRAIN PLUG	64	72365	1	GOVERNOR SHAFT WASHER
15	72334	1	CRANKSHAFT ASSEMBLY	65	68555	2	CRANKCASE DOWEL
16	75247	1	OIL SUMP ASSEMBLY	66	67806	4	CYLINDER HEAD DOWEL
17	67924	1	OIL SEAL ASSEMBLY	73	68572	2	OIL PUMP SCREW
18	67878	9	OIL SUMP BOLT	74	75272	2	SPARK PLUG TERMINAL
19	75248	2	STANDARD PISTON ASSEMBLY	75	70122	4	VALVE STEM SEAL
20	75249	2	STANDARD PISTON RING SET	76	67910	2	INTAKE VALVE SEAT
21	69327	4	PISTON LOCKING RING	78	67813	4	VALVE GUIDE
22	75250	2	STANDARD PISTON RING	81	70592	1	AIR CLEANER BASE
23	75251	2	CONNECTING ROD ASSEMBLY	82	73123	1	AIR FILTER (NOT SHOWN)
24	72346	4	CONNECTING ROD BOLT	83	70593	1	AIR CLEANER COVER
25	69316	2	EXHAUST VALVE	84	C3633	1	AIR CLEANER COVER SCREW
26	69317	2	INTAKE VALVE	85	67156	2	AIR CLEANER BASE SCREW
27	67816	4	VALVE SPRING	86	69341	1	FOAM PRE-CLEANER
28	69320	4	VALVE SPRING RETAINER	88	70597	1	AIR INLET TUBE
29	70513	4	VALVE KEEPER	89	72305	1	BREATHER DEFLECTOR
30	70584	4	VALVE TAPPET	90	67920	2	VALVE COVER GASKET
31	70530	1	CAMSHAFT ASSEMBLY	91	69328	2	VALVE COVER
32	72358	1	INTAKE MANIFOLD	92	70547	1	OIL PUMP ASSEMBLY
33	69379	2	CARBURETOR MOUNTING GASKET	93	70536	1	GOVERNOR SLIDER
34	67895	2	INTAKE MANIFOLD GASKET	94	70577	4	PUSH ROD
35	70594	2	CARBURETOR MOUNTING BOLT	95	70599	4	ROCKER ARM
36	67158	4	INTAKE MANIFOLD MOUNTING BOLT	97	70566	4	ROCKER ARM SUPPORT
37	68574	1	1/8" NPT PLUG PIPE	98	75271	1	VALVE OVERHAUL KIT
38	68554A	1	GOVERNOR SHAFT SEAL	99	67897	2	EXHAUST GASKET (NOT SHOWN)
39	68573	1	OIL PUMP O-RING	100	91481	1	GASKET AND CAP ASSEMBLY
40	70506	1	OIL GALLEY O-RING	101	91480	1	ROCKER ARM AND COVER
41	70554	1	CARBURETOR SPACER	102	D1198	1	GOVERNOR CRANK
42	70568	4	ROCKER ARM STUD				



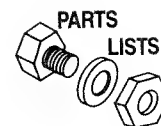
Section 6 — Exploded Views and Parts Lists

Generac Q-70G Recreational Vehicle Generator
Engine Sheet Metal – Drawing No. 89403-K

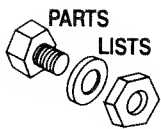


Section 6 – Exploded Views and Parts Lists

Generac Q-70G Recreational Vehicle Generator
Engine Sheet Metal – Drawing No. 89403-K



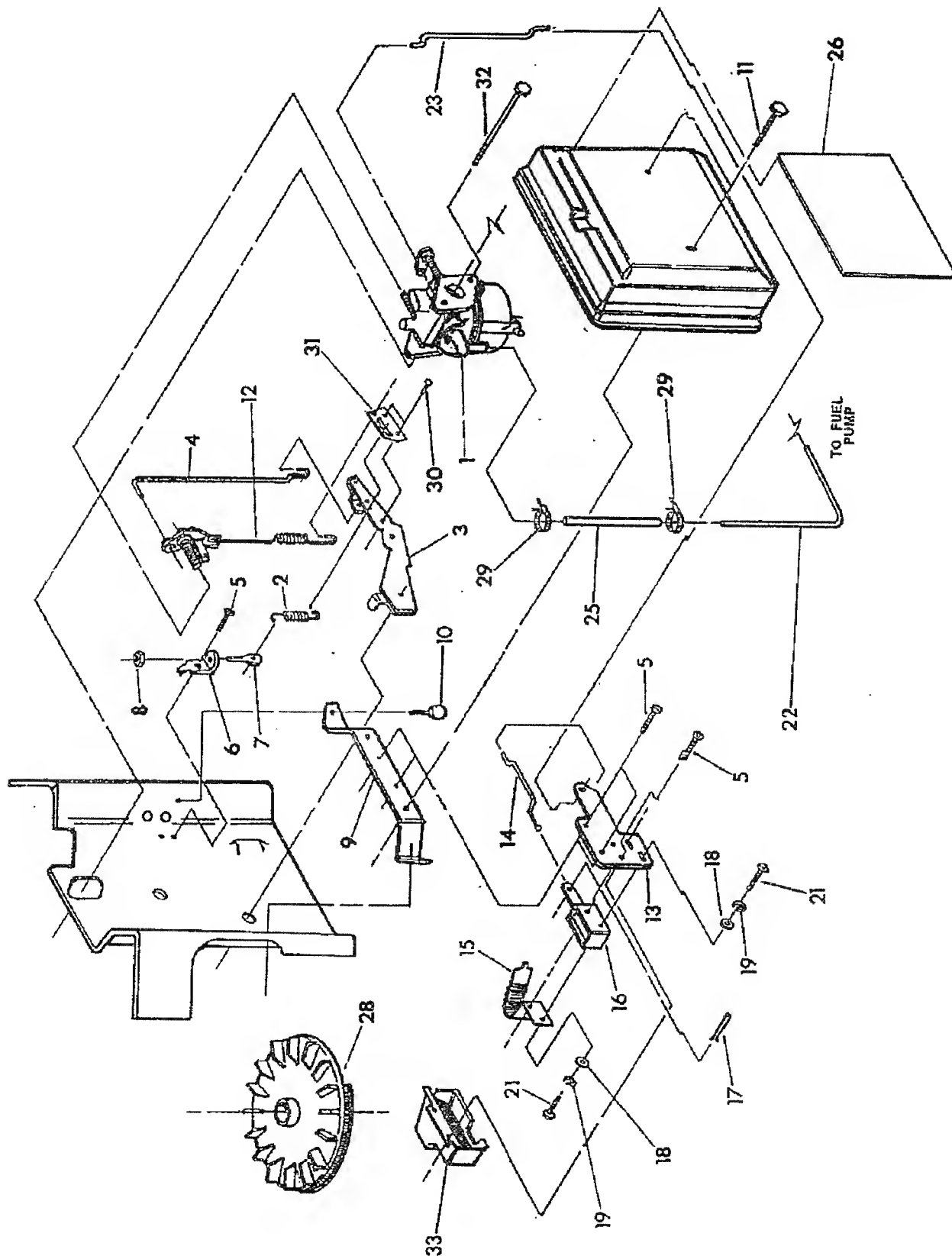
ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	1	SEE ENGINE EXPLODED VIEW of ENGINE
2	99258	1	KEY-WOODRUFF 6 x 22MM
3	67198N	1	BEVELED WASHER
4	67890	1	HEX NUT
5	87865	1	PLUG, FLYWHEEL ACCESS
6	A4456	1	3/8" SPECIAL LOCK WASHER
7	86313	1	HOUSING, ENGINE TOP
8	56893	23	SCREW (CRIMPTITE) NO. 10-24 x 1/2"
10	87750	1	SCROLL, FLYWHEEL
11	74916	1	COVER, BASE CYL. #2
12	74908	9	SCREW (TAPTITE) M5 x 10MM
13	73190	1	WRAPPER CYL. #2
14	78858	1	COVER, VALLEY
15	78859	1	WRAPPER, CYL. #1
16	74902	2	WRAPPER, BARREL
17	66476	4	HHCS/LW-M6 x 1.0 x 12MM
19	73191	1	COVER, BASE CYL. #1
20	42907	2	CAPSCREW, HEX HD.-M8 x 1.25 x 16MM
21	22129	2	LOCK WASHER-M8
22	75246	4	SCREW (TAPTITE) 3/8"-16 x 1-1/4"
23	10_-74260	1	WIRE ASSEMBLY-NO, 16
24	74900	1	STARTER COVER
25	73186	1	WRAPPER, CRANKCASE
26	81108	1	BUSHING, SNAP
27	22717B	1	GROMMET -RUBBER
28	22717A	3	GROMMET -RUBBER
29	67866A	1	O-RING
30	77001A	1	PLUG, OIL FILL
31	73132	2	BOOT, SPARK PLUG
33	87858A	1	GROUND WIRE ASEMBLY-CYL. #1
34	29289	2FT.	FOAM TAPE
35	87858B	1	GROUND WIRE ASSEMBLY-CYL. #2
36	50277	1	OIL DRAIN DECAL



Section 6 – Exploded Views and Parts Lists

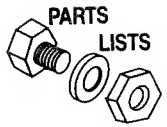
Generac Q-70G Recreational Vehicle Generator

Carburetor – Drawing No. 93753-F



Section 6 – Exploded Views and Parts Lists

Generac Q-70G Recreational Vehicle Generator
Carburetor – Drawing No. 93753-F



ITEM	PART NO.	QTY.	DESCRIPTION
1	73112B	1	CARBURETOR ASSEMBLY
2	74962c	1	SPRING, GOVERNOR
	74962g	1	SPRING, GOVERNOR q-70g
3	70155	1	LEVER, GOVERNOR
4	70108	1	ROD, GOVERNOR TO CARBURETOR
5	56893	5	SCREW (CRIMPTITE) - #10-24 X 1/2"
6	74961	1	BRACKET, GOVERNOR ADJUSTER
7	47227	1	SCREW, GOVERNOR ADJUSTER
8	37398	1	NUT, HEX LOCK (NYLON)
9	73131	1	BRACKET, AIR CLEANER SUPPORT
10	66476	2	SCREW, HEX - M6-1.0 X 12MM
11	70575	2	SCREW, HEX - M6-1.0 X 25MM
12	70125	1	SPRING, ANTI-LASH
13	73374	1	BRACKET, CHOKE SUPPORT
14	74947	1	ROD, CHOKE CONTROL
15	89473	1	BI-METAL ASSEMBLY, CHOKE
16	91306	1	SOLENOID, CHOKE
17	77091	1	HAIR PIN, COTTER
18	31879	4	FLAT WASHER - #4
19	22159	4	LOCK WASHER - #4
20	89870	1	SOLENOID FUEL SHUT-OFF (Q70G ONLY)
21	72536	4	SCREW, PAN HD. MACH. - #4-40 X 1/4"
22	87770	1	LINE, FUEL - 5/16" I.D.
23	74946	1	LINK, CHOKE
25	30340	1	HOSE - FUEL, 4.5" LG.
26	C2338B	1	DECAL, AIR CLEANER PRIMEPACT 66G
	C2338	1	DECAL, AIR CLEANER - PRIMEPACT 55G
	91352C	1	DECAL, AIR CLEANER - Q-70G
27	75252	1	KIT, CARBURETOR OVERHAUL - NOT SHOWN
28	A7782A	1	FLYWHEEL ASSEMBLY
29	40173	2	CLAMP, HOSE (SCREW TYPE)
30	66829	2	RIVET - 1/8" DIAMETER X 1/8" LONG
31	75944	1	BRACKET, GOVERNOR SPRING
32	70594	2	CAPSCREW, HEX HD. - M6-1.0 X 93 LG. W/WASHER
33	77075	1	COVER, CHOKE COIL



Section 7 – Warranty

Generac Q-70G Recreational Vehicle Generator

CALIFORNIA AND FEDERAL EMISSION CONTROL WARRANTY STATEMENT

YOUR WARRANTY RIGHTS AND OBLIGATIONS

The California Air Resources Board (CARB) and the United States Environmental Protection Agency (EPA), together with Generac Power Systems, Inc. (Generac), are pleased to explain the Emission Control System Warranty on your new engine.* New utility, and lawn and garden equipment engines must be designed, built and equipped to meet stringent anti-smog standards for the state of California and the federal government. Generac will warrant the emission control system on your engine for the periods of time listed below provided there has been no abuse, neglect, unapproved modification or improper maintenance of your engine.

Your emission control system may include parts such as the carburetor, ignition and exhaust systems. Generac will repair your engine at no cost to you for diagnosis, replacement parts and labor, should a warrantable condition occur.

MANUFACTURER'S EMISSION CONTROL SYSTEM WARRANTY COVERAGE:

Emissions control systems on 1997 and later model year engines are warranted for two years as hereinafter noted. If, during such warranty period, any emission-related component or system on your engine is found to be defective in materials or workmanship, repairs or replacement will be performed by a Generac Authorized Warranty Service Facility.

PURCHASER'S/OWNER'S WARRANTY RESPONSIBILITIES:

As the engine purchaser/owner, you are responsible for the completion of all required maintenance as listed in your factory supplied Owner's Manual. For warranty purposes, Generac recommends that you retain all receipts covering maintenance on your engine. However, Generac cannot deny warranty solely because of the lack of receipts or for your failure to ensure the completion of all scheduled maintenance.

As the engine purchaser/owner, you should, however, be aware that Generac may deny any and/or all warranty coverage or responsibility if your engine, or a part/component thereof, has failed due to abuse, neglect, improper maintenance or unapproved modifications, or the use of counterfeit and/or 'grey market' parts not made, supplied or approved by Generac.

You are responsible for presenting your engine to a Generac Authorized Warranty Service Facility as soon as a problem occurs. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

Warranty service can be arranged by contacting either your selling dealer or a Generac Authorized Warranty Service Facility. To locate the Generac Authorized Warranty Service Facility nearest you, call our toll-free number:

1-800-333-1322

IMPORTANT NOTE: This warranty statement explains your rights and obligations under the Emission Control System Warranty (ECS Warranty), which is provided to you by Generac pursuant to California and federal law. See also the "Generac Limited Warranties for Generac Power Systems, Inc.," which is enclosed herewith on a separate sheet, also provided to you by Generac. The ECS Warranty applies only to the emission control system of your new engine. If there is any conflict in terms between the ECS Warranty and the Generac Warranty, the ECS Warranty shall apply except in circumstances where the Generac Warranty may provide a longer warranty period. Both the ECS Warranty and the Generac Warranty describe important rights and obligations with respect to your new engine.

Warranty service can be performed only by a Generac Authorized Warranty Service Facility. When requesting warranty service, evidence must be presented showing the date of the sale to the original purchaser/owner. The purchaser/owner shall be responsible for any expenses or other charges incurred for service calls and/or transportation of the product to/from the inspection or repair facilities. The purchaser/owner also shall be responsible for any and/or all damages or losses incurred while the engine is being transported/shipped for inspection or warranty repairs.

If you have any questions regarding your warranty rights and responsibilities, you should contact Generac at the following address:

**ATTENTION WARRANTY DEPARTMENT
GENERAC POWER SYSTEMS, INC.
P.O. BOX 297
WHITEWATER, WI 53190**



EMISSION CONTROL SYSTEM WARRANTY

Emission Control System Warranty (ECS Warranty) for 1997 and later model year engines:

- (a) **Applicability:** This warranty shall apply to 1997 and later model year engines. The ECS Warranty Period shall begin on the date the new engine or equipment is purchased by/delivered to its original, end-use purchaser/owner and shall continue for 24 consecutive months thereafter.
- (b) **General Emissions Warranty Coverage:** Generac warrants to the original, end-use purchaser/owner of the new engine or equipment, and to each subsequent purchaser/owner, that each of its engines is ...
- (1) Designed, built and equipped so as to conform with all applicable regulations adopted by the EPA and CARB pursuant to their respective authority, and
 - (2) Free from defects in materials and workmanship which, at any time during the ECS Warranty Period, may cause a warranted emissions-related part to fail to be identical in all material respects to the part as described in the engine manufacturer's application for certification.
- (c) The ECS Warranty only pertains to emissions-related parts on your engine, as follows:
- (1) Any warranted, emissions-related parts that are not scheduled for replacement as required maintenance in the Owner's Manual shall be warranted for the ECS Warranty Period. If any such part fails during the ECS Warranty Period, it shall be repaired or replaced by Generac according to Subsection (4) below. Any such part repaired or replaced under the ECS Warranty shall be warranted for the remainder of the ECS Warranty Period.
 - (2) Any warranted, emissions-related part that is scheduled only for regular inspection as specified in the Owner's Manual shall be warranted for the ECS Warranty Period. A statement in such written instructions to the effect of "repair or replace as necessary" shall not reduce the ECS Warranty Period. Any such part repaired or replaced under the ECS Warranty shall be warranted for the remainder of the ECS Warranty Period.
 - (3) Any warranted, emissions-related part that is scheduled for replacement as required maintenance in the Owner's Manual shall be warranted for the period of time prior to the first scheduled replacement point for that part. If the part fails prior to the first scheduled replacement, the part shall be repaired or replaced by Generac according to Subsection (4) below. Any such emissions-related part repaired or replaced under the ECS Warranty shall be warranted for the remainder of the ECS Warranty Period prior to the first scheduled replacement point for such emissions-related part.
 - (4) Repair or replacement of any warranted, emissions-related part under this ECS Warranty shall be performed at no charge to the owner at a Generac Authorized Warranty Service Facility.
 - (5) When the engine is inspected by a Generac Authorized Warranty Service Facility, the owner shall not be held responsible for diagnostic costs if the repair is deemed warrantable.
 - (6) Generac shall be liable for damages to other original engine components or approved modifications proximately caused by a failure under warranty of any emission-related part covered by the ECS Warranty.
 - (7) Throughout the ECS Warranty Period, Generac shall maintain a supply of warranted emission-related parts sufficient to meet the expected demand for such emission-related parts.
 - (8) Any Generac authorized and approved emission-related replacement part may be used in the performance of any ECS Warranty maintenance or repairs and will be provided without charge to the purchaser/owner. Such use shall not reduce Generac's ECS Warranty obligations.
 - (9) Unapproved, add-on, modified, counterfeit and/or 'grey market' parts may not be used to modify or repair a Generac engine. Such use voids this ECS Warranty and shall be sufficient grounds for disallowing an ECS Warranty claim. Generac shall not be held liable hereunder for failures of any warranted parts of a Generac engine caused by the use of such an unapproved, add-on, modified, counterfeit and/or 'grey market' part.

EMISSION RELATED PARTS INCLUDE THE FOLLOWING:

- | | |
|---|--|
| 1) Fuel Metering System: <ol style="list-style-type: none">1.1) Gasoline carburetor assembly and its internal components (if so equipped).a) Fuel filter (if so equipped)b) Carburetor gasketsc) Fuel pump (if so equipped)1.2) LPG carburetion assembly and its internal components (if so equipped).a) Fuel controller (if so equipped)b) Mixer and its gaskets (if so equipped)c) Carburetor and its gaskets (if so equipped)d) Primary gas regulator (if so equipped)e) LP liquid vaporizer (if so equipped) | 2) Air Induction System including: <ol style="list-style-type: none">a) Intake pipe/manifoldb) Air cleaner 3) Ignition System including: <ol style="list-style-type: none">a) Spark plugb) Ignition module 4) Catalytic Muffler Assembly (if so equipped) including: <ol style="list-style-type: none">a) Muffler gasketb) Exhaust manifold 5) Crankcase Breather Assembly including: <ol style="list-style-type: none">a) Breather connection tube |
|---|--|

*Generac engine types covered by this warranty statement include the following:

- 1) Utility
- 2) Lawn and Garden Equipment
- 3) Recreational Vehicle (RV) Generator
- 4) Industrial Mobile (IM) Generator



Section 7 - Warranty

Generac Q-70G Recreational Vehicle Generator

GENERAC POWER SYSTEMS' THREE-YEAR LIMITED WARRANTY FOR RECREATIONAL VEHICLE GENERATORS

NOTE: ALL UNITS MUST BE INSTALLED BY GENERAC POWER SYSTEMS AUTHORIZED SERVICE FACILITIES. For a period of 3 (three) years or 2,000 (two thousand) hours of operation from the date of original sale, whichever occurs first, Generac Power Systems, Inc. (Generac) will, at its option, repair or replace any part which, upon examination, inspection and testing by Generac or a Generac Authorized Warranty Service Facility, is found to be defective under normal use and service, in accordance with the warranty schedule set forth below. Any equipment that the purchaser/owner claims to be defective must be returned to and examined by the nearest Generac Authorized Warranty Service Facility. All transportation costs under the warranty, including return to the factory, are to be borne and prepaid by the purchaser/owner. This warranty applies only to Generac generators sold and rated for "Recreational Vehicle" (RV) applications, as Generac has defined Recreational Vehicle generator applications. This warranty is effective only upon Generac's receipt, from the original purchaser/owner, of a completed Warranty Registration Card. This card is the only valid registration identification and must be presented at time of request for warranty service. Claims will not be accepted without presentation of the Warranty Registration Card. The factory recommends exercising the unit one half-hour every season.

WARRANTY SCHEDULE - COMMERCIAL APPLICATIONS

YEAR ONE - 100% (one hundred percent) coverage on part(s), labor, removal and reinstallation listed:

- **Engine** - All components
- **Alternator** - All components
- **Transfer System** - All components

WARRANTY SCHEDULE - CONSUMER/PERSONAL APPLICATIONS

YEARS ONE AND TWO - 100% (one hundred percent) coverage on part(s), labor, removal and reinstallation listed:

- **Engine** - All components
- **Alternator** - All components
- **Transfer System** - All components

YEAR Three - 100% (one hundred percent) only on selected part(s) and labor listed (Any labor and part(s) not listed, and removal and reinstallation are the owner's responsibility):

- Rotor, Stator, Computer Control Board, (if applicable with regard to the generator) Cylinder Block, Cylinder Head, Crankshaft, Piston(s), Valve, Valve Lifter(s), Intake and Exhaust Manifolds

FOR THE LIFE OF THE RECREATIONAL VEHICLE GENERATOR (IF SO EQUIPPED)

The drive train belt and pulleys (if so equipped) on generators used in recreational vehicles shall be warranted against failure due to defective materials or normal usage for the life of the generator. For the original purchaser/owner, this drive train warranty shall include part(s) and labor (removal and reinstallation are not included) plus \$50 (fifty dollars - U.S.) payment upon return of the failed belt or pulley by the original purchaser/owner. For subsequent purchaser/owner, this drive train warranty shall cover belt and pulley part(s) **ONLY** (labor not included). Labor, removal and reinstallation is the responsibility of the subsequent purchaser/owner.

Generac RV generators manufactured prior to December 31, 1997, **DO NOT** have a transferable warranty. Generac RV generators manufactured after January 1, 1998, have a transferable warranty to the second owner **ONLY** for the remainder of the three-year limited warranty. Proof-of-purchase is required and must be presented to a Generac Authorized Warranty Service Facility prior to the performance of any warranty service.

All warranty expense allowances **are** subject to the conditions defined in Generac's **SUPER SERVICE INFORMATION MANUAL**.

THIS WARRANTY SHALL NOT APPLY TO THE FOLLOWING:

- Costs of normal maintenance, adjustments, installation and start-up.
- Failures caused by any contaminated fuels or oils.
- Failures due, but not limited, to normal wear and tear, accident, misuse, abuse, negligence or improper installation. As with all mechanical devices, the GN-Series engines need periodic part(s) service and replacement to perform well. This warranty will not cover repair when normal use has exhausted the life of a part(s) or engine.
- Failures caused by any external cause or act of God, such as collision, theft, vandalism, riot or wars, nuclear holocaust, fire, freezing, lightning, earthquake, windstorm, hail, volcanic eruption, water or flood, tornado or hurricane.
- Products that are modified or altered in a manner not authorized by Generac in writing.
- Any incidental, consequential or indirect damages caused by defects in materials or workmanship, or any delay in repair or replacement of the defective part(s).
- Failure due to misapplication.
- Telephone, telegraph, teletype or other communication expenses.
- Living or travel expenses of person(s) performing service, except as specifically included within the terms of a specific unit warranty period.
- Rental equipment used while warranty repairs are being performed.
- Overnight freight costs for replacement part(s).
- Overtime labor.
- Starting batteries, fuses, light bulbs and engine fluids.

THIS WARRANTY IS IN PLACE OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. SPECIFICALLY, GENERAC MAKES NO OTHER WARRANTIES AS TO THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

GENERAC'S ONLY LIABILITY SHALL BE THE REPAIR OR REPLACEMENT OF PART(S) AS STATED ABOVE. IN NO EVENT SHALL GENERAC BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, EVEN IF SUCH DAMAGES ARE A DIRECT RESULT OF GENERAC'S NEGLIGENCE. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you. Purchaser/owner agrees to make no claims against Generac based on negligence.

This warranty gives you specific legal rights. You also may have other rights that vary from state to state.

GENERAC® POWER SYSTEMS, INC.
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